















# ANIMAL KEEPERS' FORUM



The Journal of the American  
Association of Zoo Keepers, Inc.

**JULY 2004**



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AAZK Enrichment Notebook 3rd Edition - Lee Houts, Folsom City Zoo

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30th Anniversary  
1974 - 2004

## About the Cover....

This month's cover features a Ring-tailed lemur (*Lemus catta*) drawn by Kecia Spears, a Keeper with the Zoological Society of San Diego, San Diego, CA. Lemurs are found only on the island of Madagascar. The most notable feature of the ring-tailed lemur is its tail. The black and white banded tail is used as a signal between lemurs. It is also used for warmth, wrapping around the body. Most lemur species are arboreal; however, ring-tailed lemurs are atypical in that they spend most of their time on the ground. They live in groups of 5-30 individuals and hierarchies exist within the group. Females tend to be the dominant figures. Females usually bear a single young after a gestation period of 120-135 days. The young are independent at six months and adult at the age of a year and a half. They feed on fruits, leaves, buds and small mammals. These prosimians weigh anywhere from 5-8 pounds (~2.3-3.7kg) and have a length of 37-43 inches (~94-109cm). The ring-tailed lemur's lifespan is 20 years. Like most island-dwelling species, lemurs are endangered because of habitat destruction. Thanks, Kecia!

Animal Keepers' Forum publishes original papers and news items of interest to the animal keeping profession. Non-members are welcome to submit articles for consideration. Articles should be typed or hand-printed and double-spaced. Authors are encouraged to submit their manuscripts on a disk as well as in hard copy form. Manuscripts submitted either on disk or electronically as attachments to an email should be submitted in Microsoft WORD. All illustrations, graphs, charts and tables should be clearly marked, in final form and should fit in a page size **no greater than 5.5" x 8.5"** (14cm x 22cm). Literature used should be cited in the text (Brown, 1986) and alphabetically in the final bibliography. Avoid footnotes. Include scientific name (as per ISIS) the first time an animal name is used. Thereafter use common name. Use metric system for weights and measurements (standard equivalents may be noted in parenthesis). Use the continental dating system (day-month-year). Times should be listed as per the 24-hour clock (0800, 1630 hrs. etc.). Glossy black and white or color prints (minimum size 3" x 5" [8cm x 14cm] ) are accepted. Clearly marked captions should accompany photos. Please list photo credit on back of photo. Photographs may be submitted electronically as either JPEG or TIFF file attachments.

Articles sent to Animal Keepers' Forum will be reviewed by the editorial staff for publication. Articles of a research or technical nature will be submitted to one or more of the zoo professionals who serve as referees for AKF. No commitment is made to the author, but an effort will be made to publish articles as soon as possible. Lengthy articles may be separated into monthly installments at the discretion of the editor. The editor reserves the right to edit material without consultation unless approval is requested in writing by the author. Materials submitted will not be returned unless accompanied by a stamped, self-addressed, appropriately-sized envelope. Telephone, fax or email contributions of late-breaking news or last-minute insertions are accepted as space allows. Phone 1-800-242-4519 (US); 1-800-468-1966 (Canada); FAX (785) 273-1980; email is akfeditor@zk.kscoxmail.com<

**Deadline for each regular issue is the 10th of the preceding month.**

**Dedicated issues may have separate deadline dates and will be noted by the editor.**

Articles printed do not necessarily reflect the opinions of the AKF staff or the American Association of Zoo Keepers, Inc. Publication does not indicate endorsement by the Association.

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E-Mail Addresses: You may reach Barbara Manspeaker at AAZK Administrative Offices at: aazkoffice@zk.kscoxmail.com< You may reach Susan Chan and Animal Keepers' Forum at: akfeditor@zk.kscoxmail.com<

**AAZK Website Address: [www.aazk.org](http://www.aazk.org)**

**BFR Website: <http://bfr.aazk.org>**

# ***Scoops & Scuttlebutt***



## **Enrichment Video Session Planned for Dallas 2004**

At the AAZK Conference in Dallas, September 2004, we will be having an enrichment video session! Please plan to bring:

- 1) An enrichment/training video to share.
- 2) Outline with brief description of information on video as well as contact information.
- 3) Extra VHS copy of your video to donate to the Enrichment Video Library.

Hope to see you there! ----- *AAZK Enrichment Committee*

## **Amazon.com Users--Don't Forget the AAZK Connection**

Just a reminder that if you regularly (or even occasionally) purchase items on *amazon.com*, there is a way you can also help out the Association while you are doing your shopping. If you go to *amazon.com* from the AAZK Home Page ([www.aazk.org](http://www.aazk.org)), the Association will receive 5% of the cost of your purchase. The *amazon.com* icon is at the bottom right of the AAZK Home Page. And the percentage from purchase of goods is on all items you purchase there - books, music, etc. So next time you want to do a little online shopping at *amazon.com*, get there through the AAZK website and help out your professional organization.

## **Data Forms to Soon Be Available on AAZK Website**

Very soon you will be able to go to the AAZK website and download a PDF file of each of the three AAZK Data Transfer Forms. These include the original Animal Data Transfer Form (ADT), the Enrichment Data Transfer Form (EDTF), and the Operant Conditioning Data Transfer form (OCDTF). We encourage all zoological institutions to utilize these forms when shipping an animal to another facility. Having this information travel with the animal, and made available will help ensure that receiving staff has all the pertinent data on that animal to help make the transition to its new home easier, and hopefully, less stressful. With the greater emphasis on enrichment and training at all AZA-accredited facilities, this information will prove especially important in providing continuity and consistency when an animal is shipped. Encourage your facility to make use of this important, and free, resource provided to the zoological community as a professional courtesy by AAZK, Inc.

## **Enrichment CD Receives High Praise**

Following the recent release of the Third Edition of the AAZK Enrichment Notebook (CD), review copies were sent to several people so they could give the CD a try and see what they thought. Peter Dickinson, editor of *ZooNews Digest* out of the United Kingdom, had the following to say about this new resource - "I have spent an enjoyable past two days exploring this CD. Over the past few years I have extensively read enrichment papers and books both in paper and web format and this one takes the biscuit. It is the best I have come across so far. Certainly a very worthwhile addition to every zoo library. If you have no enrichment literature then this should be your first purchase. If you have a big enrichment library then this needs to be your next purchase! Buy it!"

We are pleased that Peter found this CD so worthwhile and for allowing us to share his comments with you. Order forms for the Enrichment Notebook CD, as well as the Fourth Edition of the Biological Values Information Selected Mammals CD, are available at the AAZK website ([www.aazk.org](http://www.aazk.org)) and were also found as an insert in the June 2004 issue of *AKF*. Both CDs may also be ordered by phone from Administrative Office using a MasterCard or Visa. Cost for each is \$25.00 for AAZK members and \$40.0 for nonmembers. Prices include domestic and Canadian shipping. To order by phone call 1-800-242-4519 (US) or 1-800-468-1966.

## **Three Positions Open on the AAZK National Enrichment Committee**

The AAZK Enrichment Committee is looking for enthusiastic, creative and productive people to fill three open positions on the committee. The AAZK Enrichment Committee works year-round to create workshops for the National Conference. We are currently working to create additions to the AAZK Website/ Enrichment section, translating the Enrichment Notebook into a variety of foreign languages and much more! Your ideas can help drive the future for this committee. Be a Part of Our Vision!

**Candidates Must:**

Be a Professional Member of AAZK, Inc.

- Be a Full-time employee of a facility housing an animal collection
- Be directly involved in daily animal care.
- Have full institutional support for participation in committee projects and conference attendance is necessary
- Have access to a computer

**Desired Qualifications:**

- Proven leadership in enrichment-related activities.
- Creative, productive with good follow-through.
- Experience with public speaking and a willingness to participate in open forum discussions at conferences

**Closing Date is for applications is 15 July, 2004**

**If interested, please e-mail a letter of intent and a résumé to:** Amy Burgess, Co-Chair, AAZK Enrichment Committee [Amy.E.Burgess@Disney.com](mailto:Amy.E.Burgess@Disney.com) **Or Call for more information:** 407-938-2884. Upon receiving the resumé, a Memorandum of Participation outlining the time commitment will be sent to the applicant to be signed by the candidates' supervisors, as a show of institutional support. AAZK National Conference attendance is necessary for participation on this committee.

**New Publication Available from Save the Elephants**

*The Ivory Markets of East Asia* by Esmond Martin and Daniel Stiles reports on a 2002 survey of the ivory trade in China, Japan, Taiwan, South Korea and Hong Kong. The purpose of the survey was to establish a set of baseline indicators on aspects of the trade in the selected countries. From this, governments, wildlife conservation organizations and CITES representatives can appreciate the extent to which ivory is traded in these countries, and assess the effectiveness of policies, laws and enforcement activities related to ivory trading nationally and internationally. The data can also be used to infer the demand for illegal ivory, which is correlated with elephant poaching.

This report presents the results of the third in a series of similar surveys; the previous reports covered Africa and South and Southeast Asia. It is hoped that future surveys will enable the standardized monitoring and assessments of country and regional ivory markets as called for by CITES. The assumption is made that elephant killing is correlated with the market demand for worked ivory. An increase in ivory sales will indicate a corresponding rise in elephant deaths to supply the ivory needed to satisfy the demand, though releases of stored raw and worked ivory stockpiles must be taken into consideration. For this reason an effort was made to establish the level of current ivory stockpiles in the location surveyed.

The CITES policy most in need of evaluation is that of permitting renewed and limited international sales of ivory to Japan from three southern African nations in 1999 (Botswana, Namibia and Zimbabwe) and three more to as yet unnamed buyers in 2004 (Botswana, Namibia and South Africa). The data presented in these reports will be instrumental in achieving this objective. Any changes in the trade indicators of key countries can be compared with monitored elephant killings and with recorded ivory seizures, to ascertain whether significant correlations occur.

*The Ivory Markets of East Asia* is available free on request from: Save the Elephants, P.O. Box 54667, Nairobi, Kenya, or c/o Ambrose Appelbe, 7 New Square, Lincoln's Inn, London WC2A 3RA, U.K.



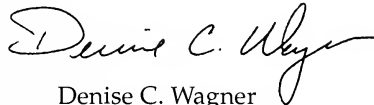
# From the President . . . .

Believe it or not even though it's only July the annual conference is right around the corner. Before you know it September will be here. This year's conference will be held in Dallas, TX and hosted by the Dallas AAZK Chapter and the Dallas Zoo. Dates are September 26-30, 2004. If you've not yet made plans to attend, I would do so. The theme this year is "Pursuing Your Wild Passions". That theme is something I'm sure we can all relate to. Look for information on the AAZK website and in the AKF. You can also go to the Dallas Zoo website at: [www.dallaszoo.com](http://www.dallaszoo.com).

AAZK also has several new offerings for you. We now have beautiful pins and patches featuring our new logo. The third edition of our Enrichment Notebook is now available from the Administrative Offices. This edition is on CD-rom and is searchable. It's a 455-page publication with a wealth of information on enrichment. The second edition sold out quickly and I'm sure this one will as well. Make sure to get your copy today!



On a personal note I was recently chided by co-workers regarding this column and why it was not written monthly. My response was to ask them if they faithfully read it or at least looked for it monthly. They assured me that they did. I told them I would write a July column to please them and they wanted me to mention them. So to answer my critics here's my shout out to Heather and Debbie but it comes with a caveat. You are now challenged to provide an article for this publication within the next six months. It's your turn to share your knowledge with your fellow keepers. I fully expect you'll rise to the challenge! Take care and be safe.



Denise C. Wagner  
President, AAZK Inc.

## Chapter Alert

**AAZK is looking for a Chapter to host  
the AAZK Annual Conference in 2007**

**Dallas, TX - 2004**

**New Orleans, LA - 2005**

**Chicago, IL - 2006**

*Your Name Here!*

Chapters wishing to obtain or submit bid materials or if you have any inquiries regarding what is necessary to host a National AAZK Conference, please contact the Administrative Offices of the Association at [aazkoffice@zk.kscoxml.com](mailto:aazkoffice@zk.kscoxml.com)

# Coming Events

**American Federation of Aviculture, Inc. 30th Anniversary Convention** - 4-7 August 2004 in San Francisco, CA. Theme: "The Evolution of Aviculture". Will include speakers, roundtables, exhibit hall and banquet. For info contact AFA office at (816) 421-2473; email [afaoffice@aol.com](mailto:afaoffice@aol.com) or visit [www.afabirds.org](http://www.afabirds.org)<

**28th Annual Meeting of the International Herpetological Symposium** - 10-13 August, 2004 at the Adam's Mark Hotel in Daytona Beach Resort, Daytona Beach, FL. For info: visit [www.kingsnake.com/ihs](http://www.kingsnake.com/ihs)<

**Association of Avian Veterinarians 25th Annual Expo and Conference** - 19-20 August 2004 in New Orleans, LA. Will include paper sessions, master classes, practical labs and workshops dealing with topics related to avian medicine and stewardship. Theme is "Birds and All That Jazz". For more info or to view the entire program visit [www.conferenceoffice.com/aav](http://www.conferenceoffice.com/aav) or email [aav@conferenceoffice.com](mailto:aav@conferenceoffice.com), or phone (303) 756-8380<

**24th Annual Association of Zoo Veterinary Technicians Conference** - 25-28 August, 2004 at Roosevelt Park Zoo in Minot, ND. Info at [www.azvt.org](http://www.azvt.org)<

**Joint Conference of the American Assoc. of Zoo Vets, the Wildlife Disease Assoc. and American Assoc. of Wildlife Vets** - 27 August-3 Sept. 2004 in San Diego, CA. For additional info, contact Wilbur Armand, VMD, Executive Director/AAZV at (610) 892-4812 or email [AAZV@aol.com](mailto:AAZV@aol.com)<

**International Zoo Educators (IZE) Conference 2004** 4-9 September 2004 at Ocean Park, Hong Kong. For more information visit - <http://www.izea.net><

**2004 AZAD Conference** - 8-12 September 2004. Hosted by the Philadelphia Zoo. The theme is "Conservation with a Ring". For more info contact Bert DeVries or Mary Murphy at [AZAD2004@AZADocents.org](mailto:AZAD2004@AZADocents.org)<

**Red Panda SSP Keeper Training Workshop 2004** 10-12 September 2004 at Knoxville Zoological Gardens, Knoxville, TN. For more information contact: Jennifer Manrod, Conservation Biologist, Knoxville Zoological Gardens, Conservation and Science Dept., P.O. Box 6040, Knoxville, TN 37914; or E-mail: [jmanrod@knoxville-zoo.org](mailto:jmanrod@knoxville-zoo.org)<; Phone: (865) 637-5331 ext.389; Fax: (865) 637-1943.

**Animal Training Workshop** - with Ken Ramirez, author of *Animal Training: Successful Animal Management Through Positive Reinforcement*. - 19-22 September 2004 at the Hyatt Regency Oakbrook, Illinois (just outside of Chicago). The workshop is open to animal care professionals who work in a zoo or aquarium as well as private animal owners. Topics will range from basic operant conditioning to advanced concepts such as problem solving and dealing with aggression. All classes include video, lecture and a variety of training games and exercises. Individual consultation available for specific training challenges of workshop attendees. Complete information and registration form available online at [www.mytrainingstore.com](http://www.mytrainingstore.com)<

**AZA Annual Conference** - 19-23 September, 2004 in New Orleans, LA. Hosted by Audubon Nature Institute. Info at [www.aza.org/ConfWork/#top](http://www.aza.org/ConfWork/#top) or email Beth Strelitz, AZA Meetings Manager at [bstrelitz@aza.org](mailto:bstrelitz@aza.org)<

**The Aquarium and Zoo Facilities Association (AZFA)** - 26-29 September, 2004 in Oklahoma City, OK. Program/registration info: [users.rowan.edu/~suyd8758/](mailto:users.rowan.edu/~suyd8758/) or contact Ernie Wilson at [ewilson@okzoo.org](mailto:ewilson@okzoo.org), phone ((405) 425-0201 or fax (405) 45-0207.

**Zoological Registrars Association Annual Meeting** - 29 Sept. - 2 Oct. 2004 in Toronto, Ont., Canada. Info at ZRA website [www.zra.homestead.com](http://www.zra.homestead.com)< as plans develop.

**25th Annual Elephant Managers Association Conference** - 14-17 October, 2004 in Tulsa, OK. Hosted by Tulsa Zoo and Living Museum. Pre- and post-trips scheduled to Dickerson Park Zoo and Riddle's Elephant and Wildlife Sanctuary (18 Oct.). For more info email: [karendunn@ci.tulsa.ok.us](mailto:karendunn@ci.tulsa.ok.us)< or visit [www.elephant-managers.com](http://www.elephant-managers.com) and/or [www.tulsazoo.org](http://www.tulsazoo.org)<

**International Marine Animal Trainers Association (IMATA)** - October 17-22, 2004 in Kolmarden, Sweden. For more information: <http://www.imata.org> or email Kirstin Anderson at: [imata2004@stofanet.dk](mailto:imata2004@stofanet.dk)

**International Symposium on Construction and Maintenance in Zoos** - 21-24 November 2004 at Zoo Zürich, Zürich, Switzerland. Programme, Additional Information, Hotel Recommendations, Registration Forms are available at <http://www.zoo.ch/symposium>

**International Elephant Research Symposium** - 3-5 December, 2004 in Fort Worth, TX. Presented by the International Elephant Foundation and the Fort Worth Zoo. This important symposium will concentrate on the research and conservation needs of captive and wild populations of elephants. We invite researchers from around the world to present conservation projects and research results on elephant management, health, nutrition, reproduction and behavior. Papers specifically addressing reproduction, calf management and elephant well-being are particularly encouraged. Interested persons can also contact Tarren Wagener at [elephantsymposium@fortworthzoo.org](mailto:elephantsymposium@fortworthzoo.org) for additional information.

**6th International Aquarium Congress** - 5-10 December 2004 in Monterey, CA. Hosted by the Monterey Bay Aquarium. Additional information in English, French and Japanese is available online at <http://www.iac2004.org><

**The 7th International Conference on Environmental Enrichment** - to be held in August 2005 in New York City, NY, USA. The conference is hosted by the Wildlife Conservation Society (WCS). Watch this page for details as they become available.

Post Your Coming Event Here - email to: [akfeditor@zk.kscoxmail.com](mailto:akfeditor@zk.kscoxmail.com)



# REACTIONS

## *A Question and Answer Forum for the Zoo Professional on Crisis Management*

*By William K. Baker, Jr., Curator  
Little Rock Zoo, Little Rock, AR*

### **Question**

*What do you recommend for primary and secondary fencing?*

### *Comments*

Okay, this is a real broad-spectrum question, but I'll try and answer. First, it all depends on what you are trying to hold and how much money you're willing to spend on your primary containment. The situation will also ultimately be affected by whether or not you are designing an exhibit that is for holding purposes, public exhibitry in a traditional zoo setting, or the more unusual such as a wildlife park, which will require extensive fencing for pasture control and animal management.

Since there are so many potential applications for primary containment in a traditional zoo setting, I'll focus on identifying a need in a smaller zoological facility where the need to potentially hold a wide variety of animals in an enclosure is always a realistic possibility. Probably the most wide usage will occur with mammals and birds. The reasoning behind this is that reptiles will most likely be held in terrariums, fish tanks, or a custom unit. Marine mammal exhibits will be highly specialized and will most likely require the services of an exhibit designer. Basically, birds and mammals *generally* require less specialized primary containment. The proviso is that whatever will be used must be adequate to contain the species in question without presenting a clear and present danger to the animal, staff, or members of the public. Translation, the containment chosen must be of quality construction and of a sufficient gauge or strength to hold the animal.

The most common style of containment in use today is some form of mesh. It's normally a specific style and often galvanized. I should mention that there are numerous facilities that have successfully used cyclone style galvanized fencing for many years with no problems. However, I do not recommend cyclone fencing as a general rule. The reason is that once it is breached it can begin to unravel. Speaking from personal experience, splicing cyclone is not one of my fun things to do in life. So, let's stick with mesh for the moment. What I normally try to do is to utilize a quality supplier for mesh. The best resource in my experience for this is the Commercial Members section in the AZA Members Directory. Mesh is available in a wide variety of fabrications, and can be had in welded panel form, rolled form, and in a drape form. The draping form style is usually identified as a woven mesh. Good examples of this are Carlos® and Phantom® style meshes. They are of an extremely high quality and can really expedite construction timetables once your poles are up and rigged for mounting.

Personally, I like using galvanized welded wire mesh that has been either powder coated or vinyl coated. I have found these to have really good properties such as rigidity coupled with a certain degree of flex in the event of animal impact. One of the best examples of this is Shepherd Mesh®, although there are numerous companies that produce quality materials in this style. Priefert® manufactures this style of mesh in a powder coated configuration that provides good service as well. One important point, the mesh opening is usually specific to the species you intend to hold. For example, smaller primates will require 1 x 1" (~2.5 x 2.5cm) or less and don't forget roofing in the specs for climbing and airborne species. One of the other styles that I have seen used for primary containment would be piano wire. It's a really neat concept and when properly installed and maintained it fades out of the visual spectrum. The downside is that your keeper staff will probably have to walk it every day and check each individual wire for weakness. Of course, gunite moats and physical barriers are always a possibility as well, it just depends on what your construction budget can support.

As far as gauge it really depends on what you are planning to hold. The single best resource for determining your species-specific needs would be the AZA Husbandry Guidelines for Mammals. If we're talking about birds my best resource has been contacting other Curators at AZA facilities that have a known reputation for advancing the management of Aves. Another great resource would be to check the conference proceedings for AZA and AAZK. While I don't have a problem in working up species-specific recommendations for mammals and birds, the better option is to talk to your SSP or PMP coordinator and follow the industry guidelines set forth by AZA.

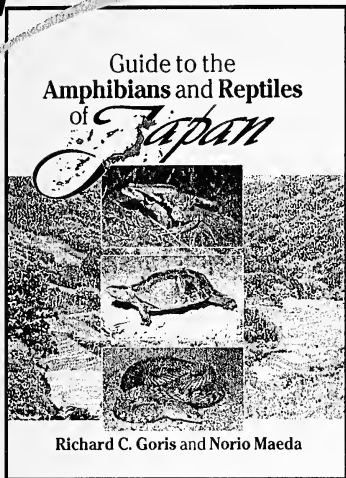
Perimeter fencing is a much easier proposition to discuss. Ideally you want to keep intruders out and have a last line of defense to hold animals in the event of an escape. I prefer using fences that are 12 feet (3.7m) in height and 14-gauge or heavier. Posts should be set in the ground to a depth of at least two feet, kept to 10 foot spans, and capable of handling the torque when the fence is stretched or put under tension. Cyclone fences are ideal for this type of situation, but I really like using something with a 1 x 2" (~2.5 x 5cm) or 2 x 4" (~2.5 x 10cm) inch opening that tends to prevent intruder entry. There's nothing worse than installing a fence and having someone demonstrate its flaws. I was visiting a facility many years ago and they had installed a 4 x 4" mesh fence for secondary perimeter fencing. After we had walked the fence line, we needed to return to grounds because of a radio call from the staff. Imagine their surprise when I just went over the fence and took the short cut to our destination. In going with a large mesh opening as a cost saving measure, they had built a really nice ladder into the design. Best advice, plan, show it to the staff, especially the keepers, and then look for flaws before proceeding on any exhibit or perimeter application. It's always easier to fix it on paper than after the fact.

**Next Month:** What do you recommend in the way of knives for zoo work?

**If you would like to submit a question for this column or have comments on previously published materials, please send them to AAZK, Inc., 3601 S.W. 29th St., Suite 133, Topeka, KS 66614 Attn: Reactions/AKF**

(About the Author: Since 1985 Bill has been active in the fields of science, zoology, and wildlife management. His education and experience include a B.S. in wildlife management and post-graduate studies in zoology, Lab and Museum Assistant, Shoot Team Leader, ERT Member, Large Mammal Keeper, Senior Keeper, and Zoo Curator at various zoological facilities. His area of research is crisis management in zoological institutions, which draws upon practical experience and training as a Rescue Diver, Hunter Safety Instructor, NRA Firearms Instructor, and Red Cross CPR/First Aid Instructor.)

# New Titles



## Guide to the Amphibians and Reptiles of Japan

by *Richard C. Goris & Norio Maeda*  
Orig. Ed. 2004 ISBN 1-57524-085-8 \$69.50

*Guide to the Amphibians and Reptiles of Japan* covers all the herpetologically significant islands of the Japanese archipelago. Written for both amateur and professional herpetologists, it lists and describes all known species, giving the currently accepted scientific name, Japanese name, meaning of Japanese name, description for identification, range, and ways of distinguishing similar species. All but 9 of the 147 species are illustrated

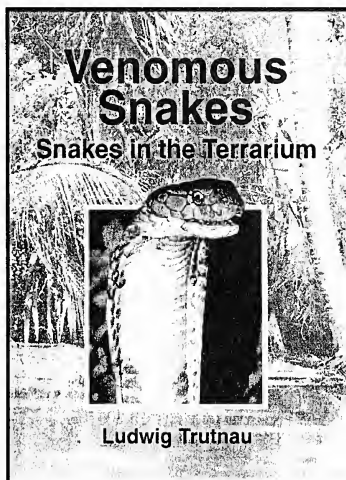
with 135 color photographs suitable for identification, and range maps for all species are included. The annotated bibliography includes the few treatises in English and the major books in Japanese containing understandable illustrations.

## VENOMOUS SNAKES: Snakes in the Terrarium

by *Ludwig Trutnau*

Translated by Donald W. Stremme, VMD  
4th German Edition 1998, English Ed. 2004  
ISBN 1-57524-138-2 \$74.50

Finally available in English, this completely revised and expanded edition contains full descriptions of 171 different species and utilizes 126 color pictures. The behavior and care in captivity of venomous snakes from the families Elapidae (cobras, kraits, and coral snakes), Viperidae (adders and vipers), and Crotalidae (pitvipers), are comprehensively discussed. Subspecies and color variations are carefully detailed. It is an essential reference for all veterinary clinics; zookeepers; and herpetoculturists.

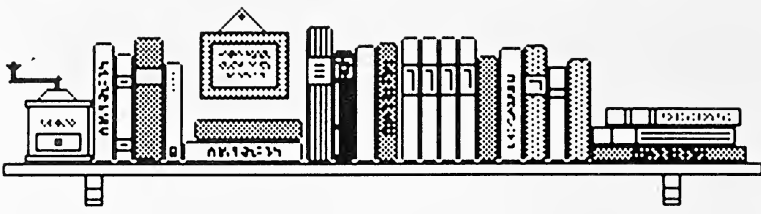


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## Book Reviews

### **Captive Birds in Health and Disease**

By John and Margaret Cooper

Copyright date 2003, ISBN 0-8839-538-8

Published by Hancock House Publishers

1431 Harrison Avenue, Blaine, WA 98230-5005

132 pp. Hardback \$34.95

*Review by Leslie Keys, Principal Keeper  
Bird Section, Detroit Zoological Institute  
Detroit, MI*

*Captive Birds in Health and Disease* is intended to help the bird keeper, whether zookeeper, pet owner, private breeder or commercial poultry manager and their veterinarians to develop a close working relationship. John Cooper, the primary author presents arguments as to why this is so important and how to go about doing it. He begins in the introduction with an overview of how understanding the biology of birds is relevant to their care. He explains exactly what domesticated animals are and why they do better in captivity than wild animals. Also included are several tables and charts outlining some examples of domestic birds, their origins, present distribution and uses. The rest of the book has chapters exploring specific types of diseases such as skin and plumage, digestive tract, respiratory, liver, reproductive and other internal organs as well as treating and preventing accidents. Also included is a chapter outlining the use of disinfectants and one written by the second author, Margaret Cooper, concerning the legal aspects of birdkeeping. This particular chapter is focused on British law and has little relevance in other countries.

The most useful point Cooper makes that is sometimes overlooked by harried keepers is the importance of record keeping and just why it is so important. Besides being useful in day-to-day caretaking, good records today make easy reference tomorrow. There is an excellent example of a daily record keeping form that bears close attention in the appendix. It provides space for daily observations including weather, general appearance of birds, droppings, pellets/castings, food and water consumption, and feather loss. Also included is space to note changes made in care and for enrichment added, plus (and this is the best part) a place to note whether any reports were made. What a great way to avoid the confusion of multiple reports from multiple keepers.

Although Cooper stresses throughout the value of working closely with the veterinarian, the information he provides would lead one to think he wants us to diagnose and map out a plan of action to present to the veterinarian, something I am sure most veterinarians would not appreciate. There is some useful information in this book, however it tends to be buried either in technical jargon or oversimplified text. This book has some potential for amateurs and novices. Professionals will most likely find it unsatisfying.

**Lizards: A Natural History of Some Uncommon Creatures -  
Extraordinary Chameleons, Iguanas, Geckos, & More**

Text by David Badger Photography by John Netherton

Copyright 2002. ISBN # 0-89658-520-4

Voyageur Press, 123 N. Second St., Stillwater, MN 55082-2210

Hard Cover, 160 pages, 100 color photographs

Price: \$35.00

*Review by Jeremy Konwiser, Animal Trainer/Presenter  
The Living Desert, Palm Desert, CA*

*Lizards* is a fascinating look at an interesting group of reptiles. It is written in an easy to read tone, and features many beautiful color photographs by the late nature photographer John Netherton. The first part of the book takes a broad look at lizards in myth, legend, and popular culture. It also touches upon the popularity of lizards as pets, and some of the roles of lizards in traditional and modern medicine.

The second part of *Lizards* is a broad overview of their physical characteristics and behavior. It explains strategies for locomotion, defense, hunting, communication, thermoregulation, and reproduction. The wonderful color photographs help illustrate the beauty of different types of camouflage, as well as providing an up close look at anatomical details.

*Lizards* then goes on to take a deeper look at the different species of lizards, providing more in-depth details on the lives of 29 species. It covers more familiar species such as green iguanas and leopard geckos, as well as lesser known lizards like the black tree monitor and eastern glass lizard. Information provided includes habitat, range, diet, reproduction, and in most cases, conservation status. Color photographs accompany each description as well.

Chapter 4 of *Lizards* is a deeper look at lizards, man, and conservation. It examines the threats to lizard populations worldwide, such as habitat loss, climate change, and collecting for the pet trade. This chapter also explains some of the conservation efforts taking place to preserve these wonderful creatures, such as captive breeding in zoos and habitat preservation and restoration.

I found *Lizards* to be a very enjoyable book and the photographs alone are worth the cover price. While most of the information presented is not detailed enough to be useful to professional herpetologists, amateur reptile enthusiasts will gain valuable information and appreciation from reading this book. I strongly recommend this book to anyone with a passing interest in lizards, or reptiles in general.

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## ***Book Announcement***

CSIRO Publishing, P.O. Box 1139, Collingwood, VIC 3066, Australia announces the availability of *Haematology of Australian Mammals* by Phillip Clark (<http://www.publish.csiro.au/nid/21/pid/3470.htm>). Dr. Richard Montali (DVM, Dipl., ACVP, Dipl. ACZM), former pathologist at the National Zoo and current acting pathologist at Taranga Zoo in Sydney writes the following about this volume: "Phillip Clark's speciality volume on hematology brings together the latest information on the blood and its constituents of Australian eutherian mammals and marsupials...this volume should be on the shelf of any veterinary professional working with the occasional marsupial, and on the desktop of the Australian mammal specialist."

# *Training Terminology—Part 5*

## *Amounts of Reinforcement*

*By Beth Stark, Chair  
Animal Behavior Management Committee*

Last month we discussed several types of stimuli and schedules of reinforcers that can be used in a training program. In regards to reinforcement, the amount provided can have a profound effect on training success. In an operant conditioning program, the animal learns from the consequences of its actions. Positive consequences can lead to the animal repeating the behavior, whereas a behavior that has a negative consequence is less likely to be occur again. Therefore, the types and amounts of reinforcers, the actual consequences to behavior in a training session, are very important to a training program.

***Magnitude of Reinforcement*** – *The size and duration of the reinforcement following a behavior.*

The delivery and type of reinforcer plays a role in the communication between trainer and animal. The amount or type of reinforcer should generally reflect the quality of the behavior it is meant to affect. The amount of reinforcer offered can communicate to the animal how well it performed the preceding behavior. For example, when training a tiger to present its hip for an injection, the trainer might bridge and reinforce the animal for approaching the cage mesh with a small piece of meat. This would tell the tiger that it is on the right track. However, if the tiger were to lean against the mesh, the trainer could again bridge the animal but then offer a large amount of meat as a reinforcer. The tiger should then associate the large reinforcement with leaning against the cage and will therefore be more likely to repeat this behavior in the future.

***Jackpot or Bonus*** – *A positive reinforcer that is much larger than usual, and usually unexpected.*

A jackpot can be offered in the form of a large amount of food reinforcement or a reinforcer that is a preferred item that is not normally offered. For example, several facilities reward orangutans with soda, candy or ice cream for allowing injections, blood draws or other challenging behaviors. These items may not be appropriate for daily training but can convey a point when offered on occasion. The jackpot is, in effect, a large magnitude of reinforcement used to convey to the animal that it has done very well. Jackpots can also be given for very simple behaviors that the animal generally performs well to maintain the quality of those behaviors. Because the animal does not know when the jackpot will occur (or the magnitude of reinforcement being offered for a given behavior) it is encouraged to perform well to earn the occasional jackpot (or a larger magnitude of reinforcement). The jackpot should be used only occasionally or it will lose its effectiveness. The quality of the behavior might decline if the animal expects a jackpot on a regular basis (why should the animal bother to expend a lot of energy for a behavior if it already expects a large reward regardless of the quality of the behavior?).

***Time-out*** – *A mild type of punishment in which the opportunity to obtain reinforcement is removed, immediately following an inappropriate or undesirable response and is generally short in duration.*

The time-out is the only form of punishment recommended in a training program. This technique is often used when the animal ignores the trainer, continually refuses a behavior or continuously performs a behavior incorrectly. In these cases the trainer walks away from the session, taking all opportunities for the animal to earn reinforcement with him or her. The animal is neither reinforced

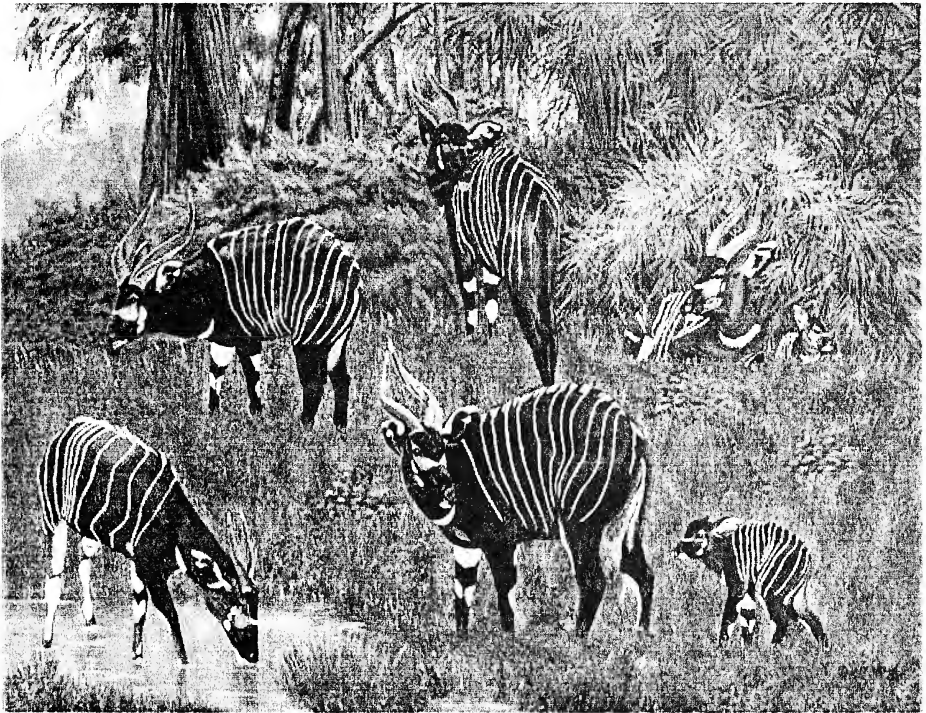
for its undesirable behavior, nor does it receive any positive punishment for its behavior. It simply is not given the option to earn additional positive reinforcement. Time-outs are generally short in duration, lasting only minutes. Upon the trainer's return to the session, the animal is basically given a clean slate - a new opportunity to participate in the training session and earn positive reinforcement.

Animal training using operant conditioning techniques is really about teaching and learning. As with so many other disciplines trainers have a number of tools to use within a training program as well as each individual training session. Training involves constant communication between trainer and animal and the terms identified within this column and series can help trainers better plan their training programs, making the training sessions more successful and rewarding for the animals.

For more information about training in the zoological setting, visit [www.aazk.org](http://www.aazk.org) and click on Animal Behavior Management Committee.

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## HELP RETURN THE MOUNTAIN BONGO TO AFRICA



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## **AAZK Enrichment Notebook, Third Edition CDROM Version**

*A product of the American Association of Zoo Keepers, Inc.*

This 455-page publication includes many facets of animal enrichment and is indexed for easy reference. The sections include an Overview of Enrichment, Enrichment Links, Enrichment Suppliers, Suggested Guidelines (Bats, Bears, Birds, Carnivores, Fishes, Primates, Reptiles, and Ungulates), Safety Considerations, Lists of Browse Plants and Toxic Plants, Cookbook Recipes for Enrichment, Enrichment Ideas/Devices (organized by category), Sample Enrichment Forms currently used in zoological facilities, and an extensive Enrichment Bibliography. This is a searchable PDF format document utilizing Acrobat Reader which is included

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# AAZK Announces New Members

## New Professional Members

Rachel Shaw, **Zoo New England (MA)**; Susan Furmanek, **Six Flags Great Adventure Safari (NJ)**; Barbra Salas, Vicki Hodge and Andrea M. Jarzab, **Buffalo Zoological Gardens (NY)**; Andy Kemerer, **National Aviary (PA)**; Kerri D'Ancicco, **Disney's Animal Kingdom (FL)**; Sandi Shoemaker, Betty Lee Elliott, and Frederick L. Wagner, **Memphis Zoo (TN)**; Amy Heaton, **Rainforest at Moody Gardens (TX)**; Monica Mitchell, **University of Texas M.D. Anderson Cancer Center (TX)**; Kalyn Z. McKenzie, **Utah's Hogle Zoo (UT)**; Cassandra Rogge, **Reid Park Zoo (AZ)**; Billy Harvey, **Runnin' W Wildlife Center (AZ)**; Sheree Green, **Safari West (CA)**; Natalie Bogues, **Point Defiance Zoo & Aquarium (WA)**; and Rebecca Dalton, **Toronto Zoo (Ontario, Canada)**.

## Renewing Contributing Members

Reed Gleason  
Portland, OR

Amy Roberts, Curator  
The Living Desert, Palm Desert, CA

Jason Peterson  
Utah's Hogle Zoo, Salt Lake City, UT

## Renewing Institutional Members

Birmingham Zoo, Inc.  
Birmingham, AL

## New Institutional Member

Alaska Zoo  
Anchorage, AK

# Good News to Report for Gray and Right Whales

Federal biologists "have reported the highest count of migrating gray whale (*Eschrichtius robustus*) calves in 11 years," according to the *Los Angeles Times*. Some 455 pairs of calves and mothers were counted migrating from the Baja Peninsula to the Bering Straight, from a vantage point on the central California coast. Biologists estimate the population at more than 20,000, up from a low of around 1,000 in 1900. The species has recovered and "was removed from the federal endangered species list in 1994." Biologists with the National Oceanic and Atmospheric Administration say the success of the gray whale population may be due to "an early ice melt in the Bering Straight and Chukchi Sea, in the Arctic Ocean," an important whale feeding ground.

*The Associated Press* has reported that the federal government has proposed regulations slowing down commercial marine vessels to prevent collisions with the endangered right whale (*Balaena glacialis*). The National Marine Fisheries Service proposal would slow ships between the mouth of the Chesapeake Bay and 30 nautical miles out to sea from November through April. That's when right whales are known to pass off the Virginia coastline.

Source: GREENlines Issue #2121 6-03-04



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# ***Biological Information on Selected Mammals 4th Edition***

***CDROM Version***

***A product of the American Association of Zoo Keepers, Inc.***

The 1,396 page *Biological Information on Selected Mammal Species* CD covers a wide range from general, breeding, and young-rearing behavior to diet and physical descriptions of 590 species. The volume is in a PDF format allowing searches by Species (Common or Latin name); or Key words using the *Find* function; or by Species (Common or Latin name), Family; or Order using the *Bookmarks*. Table of Contents are given for Orders, Families, Species by Common Name, Species by Scientific Name, and Species by Order and Family. The Appendices cover a variety of information from behavioral patterns common to families (Bovoid displays) to taxonomy (Primates). References are listed by Order and Family.

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# An Update from the Center for Ecosystem Survival

Dear Keepers, Chapters and Conservation Partners,

The Center for Ecosystem Survival wants to thank you all for joining together in the belief that the future of the Earth's wild places must be saved if future generations are to love nature. CES would also like to invite you take part in a partnership for *in-situ* conservation through programs like Adopt An Acre, Adopt A Reef and the Conservation Meter programs at your institutions. Through our mutual goal of promoting and supporting rainforest and coral reef conservation to the public, we have raised close to \$3 million for direct ecosystem preservation. The passion you inspire will make all the difference in the world for reversing the loss of biodiversity.

Your partnership is critical to our success, and we would like to extend thanks for your commitment to conservation. As our consortium grows (we now have 119 zoo, aquariums, natural history museums and botanical gardens as members), we want to offer to send you Adopt An Acre and Adopt A Reef brochures for your Chapters, zoo guests, school children and the business community.

CES partners have used the Adopt An Acre program and brochures to add value to educational outreach programs, docent training, teacher in-service, direct mail campaigns, newsletters, and special conservation events. From remote tropical rainforests to deep ocean habitats we have always depended on nature as a source of food, medicine, products, beauty and inspiration. Your participation allows us to focus our combined energies on some of the most critically important ecosystems to not only save millions of species, but also to preserve precious ecological processes.

Effective conservation needs an informed, supportive and involved public. Through our conservation partnership we inform, promote and inspire change. These are the steps we are taking to save wildlife and wild ecosystems. Your vision of instilling conservation awareness and action at your institutions adds strength to both of our missions of saving and protecting the biological diversity of this planet.

Please email us today and let us know how many brochures you can use - 500, 1000, 1500 - and we will send them right away. Thank you for your stewardship and friendship. All the very best for a great summer.

Best regards,



Norman Gershenz, Director  
Center for Ecosystem Survival, 699 Mississippi Street, Suite 106, San Francisco, CA 94107  
(415) 648-3390 website: [www.savenature.org](http://www.savenature.org) email: [info@savenature.org](mailto:info@savenature.org)



CENTER FOR  
ECOSYSTEM  
SURVIVAL

# Idea for Raising Funds for Conservation

or

*How to get your BIRD to ask for donations*

By

*Leslie Storer, Wildlife Programs Supervisor  
The Living Desert, Palm Desert, CA*

The Living Desert is an independently run non-profit zoological and botanical garden. The Wildlife Programs Department is responsible for writing, producing, and performing our own daily show. Zoo guests come to an entertaining and educational show to see birds and mammals indigenous to desert climates. Each animal has a set routine exhibiting natural behaviors. Well, ... each animal except one: Echo, the sulphur-crested cockatoo (*Cacatua galerita*).

## Designing the Behavior

or

*Let's throw ideas out there and see what "flies"*

You've probably been to bird shows and seen the following behavior:

- 1) A volunteer with a dollar bill stands up in the theater.
- 2) A small bird flies out to the volunteer to collect the bill.
- 3) The bird brings the bill back to the trainer.
- 4) The trainer pretends to keep the money.
- 5) The trainer sends the bird to return the dollar bill.

This is a fun behavior and one the audience loves. The trainer can talk about natural history or bird intelligence while the audience is being entertained.

When brainstorming potential cockatoo behaviors, this routine, A.K.A "the dollar bill trick", came up. We had reservations though. Most birds that perform the dollar bill trick are smaller than the sulphur-crested cockatoo. Echo is heavy and his nails can become very sharp. Even an adult volunteer might be intimidated. We are also aware of how powerful a cockatoo's beak is. The idea of the audience interacting with Echo was quickly eliminated.

We decided to avoid a "talking parrot" routine. We were afraid that a talking parrot would convey the message "What fun pets they make!" We did not want to encourage everyone to run out and buy a pet cockatoo. If anything, we'd rather encourage the opposite. Besides, Echo does not do much talking. In fact he is surprisingly quiet (knock on wood).

There were several criteria this behavior had to meet. Echo is fully flighted, so we wanted to incorporate free flight. We wanted to use a different flight pattern than those used by other birds in our show. We did not want the audience to see any backstage trainers when he entered or exited.

Finally, we wanted to convey a conservation message. The sulphur-crested cockatoo is not an endangered species, so there was no obvious conservation message there. We wanted to avoid talking about a species that is not on the stage. Introducing conservation would be tricky.

## The Behavior

or

*We're going to try to get the bird to do this...*

After many snacks and several drinks (we had a show meeting when we were off the clock), we came to a conclusion that incorporated all of our ideas and addressed our concerns: we would install a donation box on the stage, and Echo would help draw attention to it.

Before the last animal of the show, the speaker, also a trainer, points out the donation box. The speaker tells the audience about the money The Living Desert donates to outside conservation and research projects that benefit endangered species. The speaker encourages the audience to drop spare change into the box after the show. The speaker continues by saying that the trainers at the amphitheater also put their coins in the box but in a more creative way, at which point the speaker solicits a coin from the audience. The speaker retrieves the coin and returns to the stage. Echo flies out from the right side of the stage, pauses on a perch, then flies to the speaker. He picks up the coin and flies to the donation box on the left side of the stage.



Photo: Leslie Storer

**Echo lands on the carpeted platform behind the box. Silence fills the theater as audience, speaker, and backstage trainers anticipate the clang of the coin hitting the bottom of the metal mailbox.**

We purchased an inexpensive white, metal mailbox from a home improvement store and our maintenance department converted it into a donation box. The mailbox was placed towards the front of the stage near the exit. There is a log cabin facade at this end of the stage, so the mailbox appears to belong to the log cabin. We dubbed the box "Coins for Conservation" and our graphics department decorated the box with the name and a couple animal silhouettes. We felt asking for coins was not too demanding. Even school children can participate by putting a penny in the box. We are lucky enough to be located in an affluent community, so there are several times we open up the box to find a twenty-dollar bill. I empty the box as often as necessary, which, during our busy season, is a couple times per week.

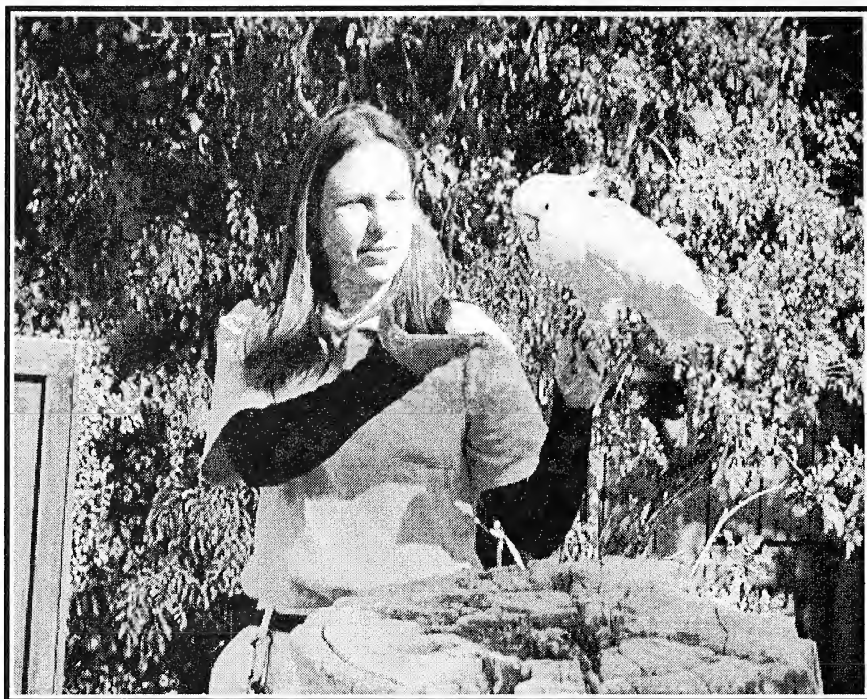


Photo: Leslie Storer

Following the deposit, the audience laughs and claps, and Echo flies to a window in a log cabin façade and walks backstage.

## How We Trained It

or

*Accounting for Cockatoos 101*

We did not do any revolutionary training. We mapped out the behavior, planned the steps, and then executed the plan. Certain behaviors were already established. Echo already loaded willingly into a crate, he would fly to a perch when visually cued, and he would fly to a trainer when visually cued.

We started the training by moving Echo from his home enclosure to a large training enclosure. After we were confident with his performance in the training enclosure, we took him and the props outside to the stage. The steps we taught follow.

1. Starting in a large training enclosure, Echo picks up a washer.
2. Echo drops a washer into a metal bowl; concurrently Echo is introduced to mailbox prop.
3. Phase out washer and phase in a variety of coins.
4. Echo drops any coin into a metal bowl.
5. With the bowl in an open-ended mailbox, Echo drops a coin through hole in the mailbox into bowl.
6. After giving Echo the coin, send him (free flight) to the table with the mailbox. Increase the distance from trainer/coin to mailbox.
7. Acclimation time on stage: in a rolling enclosure, Echo was moved to the stage for periods of time to familiarize himself with the stage environment.

8. Practice coin with mailbox in final position on stage; concurrently desensitize Echo to walking through cabin window.
9. Send Echo from crate to trainer/coin. Trainer sends Echo to mailbox. Trainer sends Echo to cabin window. Distances between each are short to start.
10. Increase distances: crate to trainer/coin, trainer/coin to stationary mailbox.
11. Phase out cue to cabin window.
12. Introduce audience.
13. Show time!

## **Evaluating Our Performance**

or

*Did it work?*

While the behavior is not natural, we feel that since Echo is not being ridiculed or “humanized”, we thought it was acceptable. Perhaps people are accustomed to seeing parrots performing parlor tricks, and this is sort of a parlor trick with a purpose.

Our management has not complained. This could be due in part to the fact that Echo’s performance can net several hundred dollars in one month. We have noticed definite differences in donations when Echo is absent. If the speaker points out the box at the end of the show, we collect a few coins if we’re lucky. However, if Echo performs in the show, the sound of coins falling makes us wonder if we’re standing beside a slot machine.

## **Applying the Concept**

or

*Now you try!*

There are many ways you can incorporate this idea, or a variation, at your facility. You might already have a trained animal show into which you can incorporate the behavior. You might do “meet and greet” interactions with the public, in which case you can do your “meet and greet” near a donation station. You could not only talk about your animal, but also your conservation efforts that might otherwise go unnoticed by the general public.

I am hoping this paper provides more than just a blueprint for others but also a springboard for ideas. Maybe you have different animals that can learn this behavior. Maybe there is a specific organization with whom you work, and you wish to acquire a relevant animal. Modify the plan to suit your facility.

The important things to remember are to train and present respectfully. You can mentally and physically stimulate your animal, entertain and inspire the public, and improve the bottom line all at the same time.

Have any questions? Author contact information:

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*shown actual size*



*enlarged to show detail*

The new AAZK logo design (by Amy Burgess of Disney's Animal Kingdom) is now featured on both a patch and enameled pin. The colors are tan, rust, burgundy, grey, blue with a black border. Patches (4" x 3") cost \$8.00 each. The pins (3/4") cost \$6.00 each. Prices include domestic and Canadian shipping. This price covers postage for one pin or one patch to overseas addresses. For overseas orders of from 2-6 patches or pins, you **must** add \$2.00 additional for shipping.

Please send \_\_\_\_\_ patches and/or \_\_\_\_\_ pins

|                               |                 |
|-------------------------------|-----------------|
| # patches x \$8.00            | \$ _____        |
| # pins x \$6.00               | \$ _____        |
| overseas postage if necessary | \$ _____        |
| <b>TOTAL</b>                  | <b>\$ _____</b> |

Name \_\_\_\_\_

Address \_\_\_\_\_ Apt. # \_\_\_\_\_

City \_\_\_\_\_ State/Province \_\_\_\_\_

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Payment Options: check enclosed \_\_\_\_\_ Mastercard \_\_\_\_\_ VISA \_\_\_\_\_

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Credit Card # \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Exp. Date \_\_\_\_\_

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Signature \_\_\_\_\_

*Mail completed Order Form and payment or authorization to: AAZK, Inc., 3601 SW 29th St., Suite 133, Topeka, Kansas 66614-2054 USA. . North American phone orders using a Mastercard or VISA credit card may be placed by calling 1-800-242-4519 (U.S. ) or 1-800-468-1966 (Canada)*



**2004 AAZK NATIONAL  
CONFERENCE  
DALLAS, TEXAS  
SEPT. 26 - 30, 2004**



## **WEBSITE**

For more information about the conference check out our website at: <http://www.dallaszoo.com/oth/oth.asp?page=aazk> A chat group will be available to assist those searching for roommates.

## **CHAPTER CHALLENGE**

This is a great opportunity for your Chapter to win a free conference registration and 5-night hotel stay. Consider sponsoring a hospitality suite or morning or afternoon break. Minimum contribution \$250 and deadline is July 15.

## **TRAVEL INFORMATION**

American Airlines is the official conference airline. Use group code number S0594AL when you book to get a 5-10% discount.

## **TEXAS STATE FAIR**

Half price tickets (\$6) to attend this spectacular Texas exhibition are available on the conference registration form. Check out the famous Kings of the Wind bird show, including birds diving from the tallest ferris wheel in Texas.

## **VIDEO NIGHT**

Don't forget to bring your enrichment and training videos. There will be nightly showings in the Hospitality Suite.

## **AUCTION ITEMS**

Please consider bringing an item for our silent or live auction. If possible, send it early to: Dallas AAZK, c/o Dallas Zoo, 650 S. R.L. Thornton Fwy, Dallas TX 75203

**2004 AAZK NATIONAL CONFERENCE  
DALLAS, TEXAS  
SEPTEMBER 26 - 30, 2004**

**CONFERENCE REGISTRATION**

*(Please type or print clearly)*

Name \_\_\_\_\_ Phone \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State/Province \_\_\_\_\_ Zip \_\_\_\_\_  
Institution \_\_\_\_\_  
Position/Title \_\_\_\_\_  
Email address \_\_\_\_\_  
Presenting a Paper/Poster/Workshop? \_\_\_\_\_ Bringing an auction item? \_\_\_\_\_  
Vegetarian? \_\_\_\_\_

**REGISTRATION FEES \***

**REGISTRATION DEADLINE IS 23 AUGUST 2004!**

|                         |                     |       |
|-------------------------|---------------------|-------|
| AAZK Member (full week) | \$150 (US currency) | _____ |
| AAZK Spouse (full week) | \$150               | _____ |
| Non-member (full week)  | \$200               | _____ |

**DAILY RATES**

|  |      |       |
|--|------|-------|
| Sun 26 Sept (Ice Breaker)                    | \$25 | _____ |
| Mon 27 Sept (Papers, Breaks)                 | \$35 | _____ |
| Tues 28 Sept (Zoo Day, Lunch, Dinner)        | \$35 | _____ |
| Wed 29 Sept (Papers, Break, Silent Auction)  | \$35 | _____ |
| Thurs 30 Sept (Papers, Breaks, Awards lunch) | \$40 | _____ |
| Thurs 30 Sept (Banquet)                      | \$50 | _____ |
| Pre-Conference Trip                          | \$60 | _____ |
| Post-Conference Trip                         | \$25 | _____ |
| Discounted State Fair ticket                 | \$ 6 | _____ |
| T-shirt M ___ L ___ XL ___ XXL ___           | \$ 5 | _____ |
| ( T shirts \$10 at conference)               |      |       |
| LATE FEE after 8/23/04                       | \$25 | _____ |
| (applies to week, daily or trip, per person) |      |       |

**TOTAL FEE ENCLOSED** \_\_\_\_\_

\*Fees includes a \$50 contribution to AAZK National.

Check enclosed \_\_\_\_\_

Please make checks or money orders payable (in U.S. funds) to: **Dallas AAZK 2004.**

Please charge to: Master Card \_\_\_\_\_ AmEx \_\_\_\_\_ Discover \_\_\_\_\_ Visa \_\_\_\_\_  
Card Number \_\_\_\_\_ Expires \_\_\_\_\_  
Name as it appears on card \_\_\_\_\_

Signature \_\_\_\_\_

Registration fee **DOES NOT** include the cost of Conference Proceedings.

**No refunds after 11 September 2004.** Send this form and all fees to: AAZK 2004 Conference Registration, Dallas Zoo, 650 S. R.L. Thorton Freeway, Dallas, TX 75203.

Adam's Mark Hotel Dallas  
400 N. Olive Street ~ Dallas ~ Texas 75201  
(800) 444-2326 FAX (214) 777-6532  
[www.adamsmark.com/dallas/index.asp](http://www.adamsmark.com/dallas/index.asp)

American Association of Zoo Keepers National Conference  
September 26-30, 2004  
Hotel Reservation Form  
Reservation Deadline is: September 1, 2004

**ONLY ONE REGISTRATION FORM PER ROOM.** Fill it in completely with each roommate's information. MasterCard, Visa, American Express, Diner's Club and Discover are accepted for a guaranteed room. If the room is cancelled within 72 hours of arrival date, credit card(s) will be charged the appropriate room rate.

**\*\*\*DO NOT send this form to the Dallas Zoo\*\*\***

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Single<br>\$102.00 | <input type="checkbox"/> Triple<br>\$123.00 | <input type="checkbox"/> Suite - Single/Double<br>\$205.00 |
| <input type="checkbox"/> Double<br>\$102.00 | <input type="checkbox"/> Quad<br>\$123.00   | <input type="checkbox"/> Suite - Triple/Quad<br>\$226.00   |
| <input type="checkbox"/> King Bed           |   | <input type="checkbox"/> Smoking                           |
| <input type="checkbox"/> 2 Queen            |   | <input type="checkbox"/> Non-Smoking                       |

IF SEPARATE INVOICE IS REQUIRED FOR EACH PERSON, PLEASE CHECK BOX.

**(Duplicate below only and send information for each roommate.)**

First person:

Name: \_\_\_\_\_

Arrive: \_\_\_\_\_ Depart: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Credit Card # \_\_\_\_\_ Exp. Date \_\_\_\_\_

Signature: \_\_\_\_\_

Phone: (\_\_\_\_) \_\_\_\_\_ Email: \_\_\_\_\_

**Always mention that you are with AAZK.** All reservations are on a first come, first served basis. Hotel tax is 15%. Conference rates are available September 23 - October 3, 2004. Come early, stay late.

# Final Call for Papers

The theme for this year's conference is "Pursuing Your Wild Passions." We are looking for papers, posters, workshops or roundtables that include inspirational or motivational aspects of the zoo keeping profession. Presentations involving all taxons are desired. Topics of interest include husbandry techniques, training, enrichment, education, exhibit design, conservation, research, and professional development.

## **Include the following information with each abstract:**

- Name and title of presenter(s)
- Institution
- Address, including e-mail
- Title of paper, poster, workshop or roundtable
- Short bio of presenter (for introduction)
- Audio/Visual needs

**Deadline for Abstracts:**

**20 July 2004**

**Deadline for Papers:**

**26 August 2004**

Abstracts should be limited to one or two paragraphs. Abstracts must include in detail the significance of the topic to be presented along with the results, conclusions or benefits of the work described. The relevance of the presentation to the conference theme should also be included. Poorly written or incomplete abstracts will be returned!

For further information on submissions or to send abstracts by e-mail contact Jeanette Boylan at [jboylan@mail.ci.dallas.tx.us](mailto:jboylan@mail.ci.dallas.tx.us) Or, submit two(2) copies of the abstract to: Jeanette T. Boylan, Dallas Zoo, 650 South R. L. Thornton Fwy., Dallas, TX 75203

## **Pre-Conference Trip**

**Saturday Sep.25<sup>th</sup> and Sunday 26<sup>th</sup> to Cameron Park Zoo and Fossil Rim Wildlife Center**

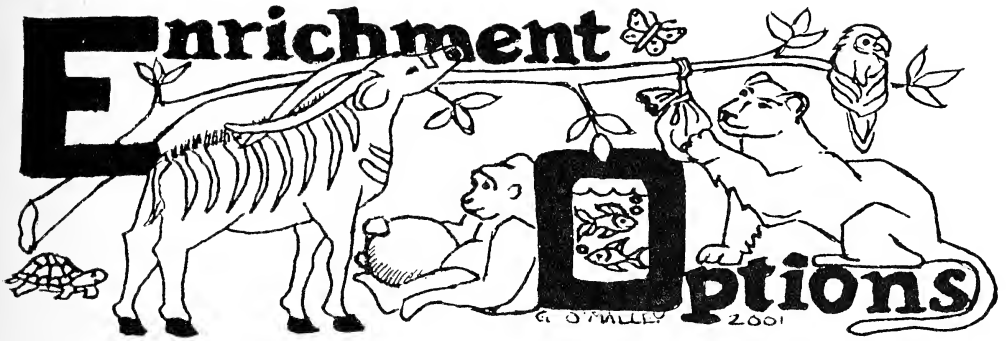
The group will leave the Adam's Mark at 7:00 am on September 25. A light breakfast will be provided on the way. We'll travel to Waco and tour Cameron Park Zoo. Their zoo staff will provide a Texas BBQ lunch. After lunch we'll depart for Glen Rose and the Fossil Rim Wildlife Center, where we'll spend the night. You will need to bring a sleeping bag and pillow and dinner will be on your own. Fossil Rim will provide breakfast on Sunday morning and then we'll tour the park. Lunch will be on your own. The van will return to the Adam's Mark by 5:00 pm in plenty of time for the ice-breaker. **Cost \$60.00**

## **Post Conference Trip**

**Friday Oct. 1<sup>st</sup> to Caldwell Zoo in Tyler, Texas.**

The group will leave the Adam's Mark at 7:00 am on October 1. A light breakfast will be provided on the way. We'll travel to Tyler and tour Caldwell Zoo, including behind the scenes tours. Caldwell Zoo is a beautiful facility and home to a number of innovative mixed species exhibits. Lunch will be available at a discount. We'll arrive back at the Adam's Mark by 5:00 pm. **Cost \$25.00**

Limited availability. Register now! For more information on pre/post trips; go to <http://www.dallaszoo.com/oth/oth.asp?page=aazk> or contact Alex Vasquez at [Avsqz123@aol.com](mailto:Avsqz123@aol.com).

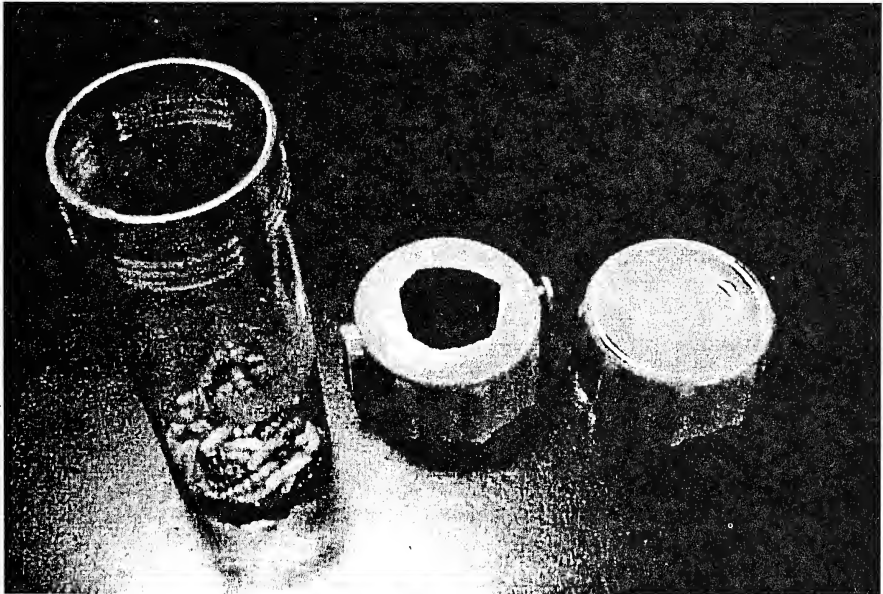


*EO Editors - Dawn Neptune, Utah's Hogle Zoo  
and Rachel Cantrell, Disney's Animal Kingdom*

## ***Enrichment Observations at the Newark Museum MiniZoo***

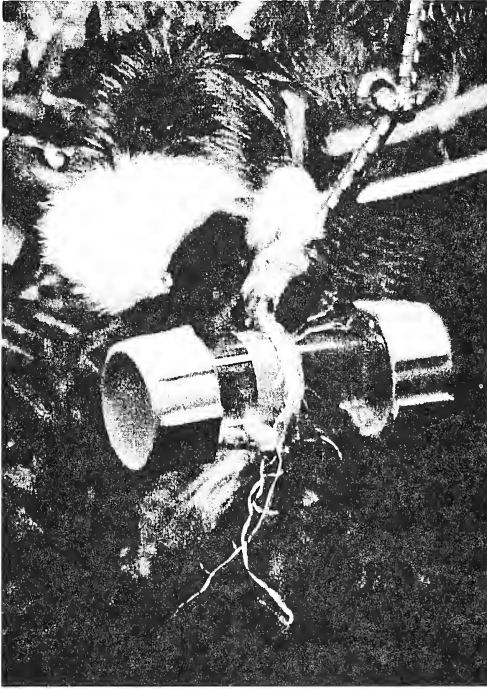
*By Kristen Schmid, Senior Animal Keeper  
The Newark Museum Mini Zoo, Newark, NJ*

During our never-ending search for enrichment items for our 0.2 Cotton-top Tamarins (*Saguinus oedipus*), we discovered and found success with two food-based items, the Clear Can® and the Brussels Sprout “tree.” The Clear Can®, manufactured by the Crown Bolt Company, is a plastic storage container available at your local hardware store in several sizes. It is a clear plastic cylinder about eight inches long, closed at one end and open at the other. A slotted plastic cap (through which we cut a large hole) screws onto the open end of the tube, and a solid cap is fitted over the closed end. Mealworms or other treats can be placed inside (Figure 1).



**Figure 1** - The Clear Can® filled with mealworms  
*(Photo by Kristen Schmid)*

The Clear Can was hung from elastic cords inside our exhibit. Tamarins, and perhaps larger primates, can reach through the open end for the treats inside or even learn how to unscrew the caps. Our tamarins did not realize one end was open and Dana, the elder female tamarin, persistently tried to grab the mealworms through the clear plastic (Figure 2). It was only after she was shown the open end by the author (Figure 3) that she reached inside repeatedly. Surprisingly, she also learned to tip the entire can until the mealworms fell out to the bank below.



**Figure 2** - Dana the Cotton Top Tamarin looking through the plastic  
*(Photo by Kristen Schmid)*

Mini Zoo Keeper Holly Griffiths found this Brussels Sprout “tree” at our local supermarket. We were surprised to learn this is how they grow naturally (Fig 4). We couldn’t ask for a better, completely edible enrichment device.

Although we had successes with food-based activities such as these, I realized that all the activities the tamarins had engaged in since 1996 (when Mini Zoo keepers first began recording data) were food-based. Favorite treats were hidden, scattered or presented in a way which required the tamarins to search, hang, or manipulate novel items. Until April 2003, Andie, the younger female tamarin, always performed poorly at these tasks, allowing her older sister

Dana to “bully” her and was sometimes so afraid of the new item she would not participate at all. Dana, on the other hand, was always immediately interested and quick to find the food.

After five years of working closely with the tamarins, I have personally observed and accepted these differences between the behavior and personalities of the two sisters. Andie has always been the more timid of the two, less likely to accept new experiences and slower to figure out challenges we have presented them with as part of their enrichment program. These observations were passed onto me during my training as an intern and I in turn have passed them on to all new interns.



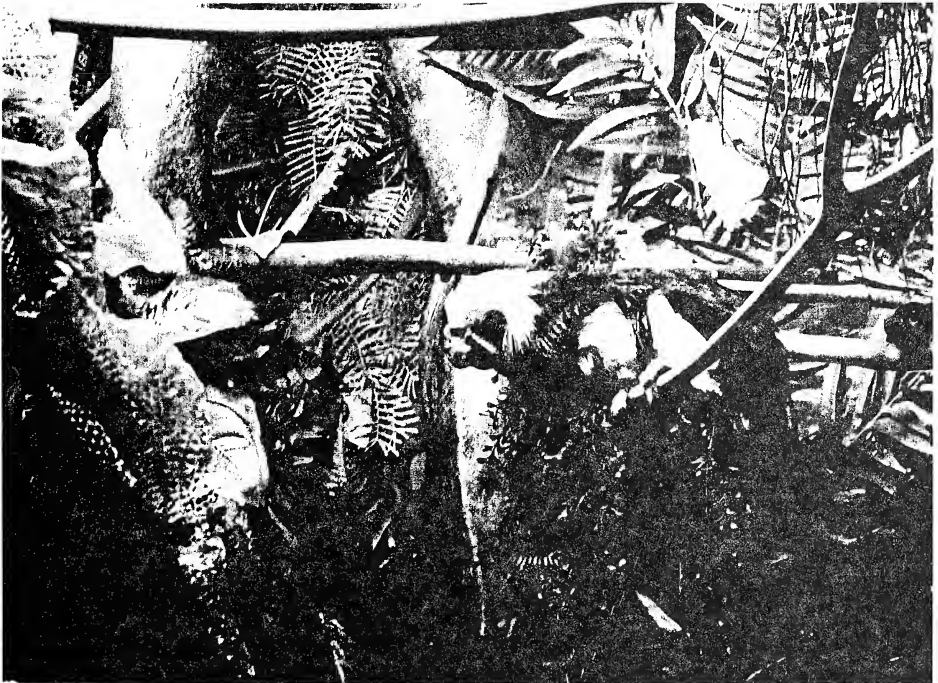
**Figure 3** - Author showing Dana the opening  
*(Photo by Kristen Schmid)*



**Figure 4 - Holly and the "tree"**

*(Photo by Diatta Jones)*

In an effort to specifically interest Andie, I began exposing the tamarins to enrichment activities that were not food-based, such as different textures, scents, and visual stimulation. They were presented with mirrors, fleece and burlap cloths, rattles, rawhide chews, and stuffed animals, and they were encouraged to pick up and handle these items. I also tried letting them explore different substances such as dirt, sand, hay, grass, snake sheds and feathers (Figure 5) and water. In April 2003, I began to notice that Andie was the first to respond to these items, exactly the opposite response I expected. In June, I began working with zoo volunteer Scott Penn from Ramapo College. We tried several more non-food based activities, such as remote-controlled baby mobiles (Figure 6), audio recordings, windchimes, balloons, and video recordings of animals played for them on television. We were

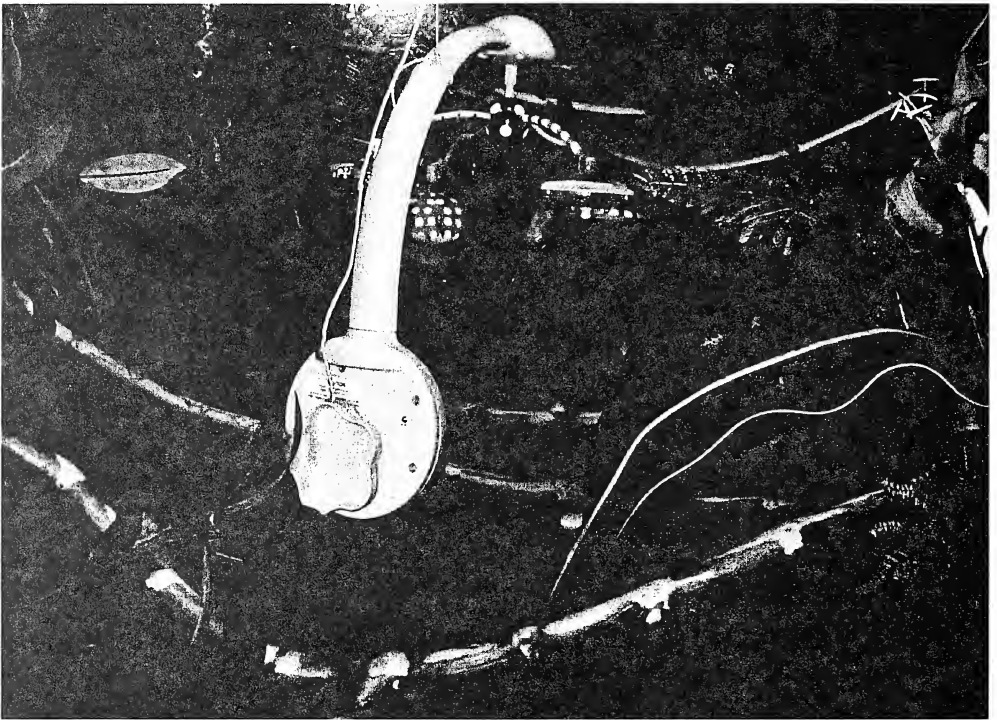


**Figure 5 - Snake sheds and feathers hung in the exhibit** *(Photo by Kristen Schmid)*

fascinated as we watched Andie progressively become more interested and curious and respond quicker to each item. We also noticed that when presented with a food-based activity, she was more interested and curious than she had ever been before and seemed to perform better. She has “come out of her shell.”

What we had mistaken for inferior intelligence or skill seemed to us to be a simple lack of interest in a certain type of stimulus. Perhaps Andie simply does not have an appetite to match her sister’s and therefore is not driven by food.

I feel we have used the practice of animal enrichment to the fullest, actually enhancing Andie’s enjoyment, curiosity and mental well being. It seems as though by being exposed to things she alone was interested in, Andie has gained more confidence and lost her fear of new experiences and items. In the future, she will be better equipped to deal with changing situations such as new keepers, removal from the exhibit if necessary and the possibility of having to accept a new tamarin should her elder sister pass.



**Figure 6** - Remote-controlled baby mobile in the tamarin exhibit (Photo by Kristen Schmid)

*(Ideas appearing in this column have not necessarily been tested by the editors for safety considerations. Always think ahead and use good judgement when trying new ideas. You are invited to submit materials for the Enrichment Options Column. This might include recipes, toys, puzzle feeders, olfactory enrichment ideas, etc. Drawings and photos of enrichment are encouraged. Send to: AKF/Enrichment, 3601 S.W. 29th St., Suite 133, Topeka, KS 66614-2054. Eds.)*



# Legislative/Conservation Update

Compiled by Georgann Johnston  
Legislative Advisor  
Sacramento, CA



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## Popcorn Used to Simulate Oil Spill

A group of Norwegian government agencies and private environmental interest groups have developed a plan for a simulated oil spill clean-up this summer. Instead of creating a mess of sticky crude oil, the experts are dumping popcorn into the waters just off Norway's west coast. "We didn't want to spill real oil, but wanted the exercise to be as realistic as possible while also being environmentally friendly," said the operation adviser for the project.

When popcorn absorbs water it forms an emulsion that is very similar to spilled oil, and mimics the effect of ocean currents on oil. The plan will dump 175 cubic feet of popcorn, enough to create a roughly 330 x 600 foot slick. Then about 300 people in more than 30 boats, plus observation aircraft, will respond as they would if it had been a real oil spill from one of the many offshore oil platforms that make Norway the world's third largest oil exporter.

The best thing about using popcorn, says the same spokesperson, is that any part of the spill that gets past the human clean-up crews will vanish harmlessly. "It'll end up as a little food supplement for fish, birds and wildlife," he said. The project has financial support from the Norwegian Clean Seas Association for Operating Companies, an organization of 13 oil companies operating in Norwegian waters. *Source: CBSNews.com 8 June 2004*

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## Interior Department Announces Wetlands Projects and Wildlife Refuges Funding

Interior Secretary Gale Norton announced last month that the Migratory Bird Conservation Commission has approved more than \$18 million for habitat conservation to benefit migratory birds. At the same time, the Commission also approved the acquisition of more than 3,500 acres of important migratory bird habitat to be added to the National Wildlife Refuge System.

The Commission's action will fund grants to states and other partners through the North American Wetlands Conservation Act (NAWCA), to meet important habitat goals for migratory birds. The Commission also allocated revenue from the sale of the Migratory Bird Hunting and Conservation Stamp (Duck Stamp) to purchase key tracts of land for the Service's National Wildlife Refuge System in Michigan, Texas and West Virginia.

The NAWCA Small Grant Program funded 43 projects for nearly \$2 million in 22 states and Puerto Rico to protect or restore nearly 12,000 acres of wetlands and associated upland habitats. Project partners added more than \$11 million. Since 1996, the Small Grant Program has funded more than 239 projects along with more than 665 partners. Partners added more than \$69 million to more than \$10.2 million in grants to conserve some 81,271 acres of habitats in the United States.

"Sportsmen and women have contributed a great deal to the development of the National Wildlife Refuge System," Interior Secretary Gale Norton said. "Money raised by the sale of Federal Duck Stamps pays for these land acquisitions. Since the first Duck Stamp sale in 1934, nearly \$700 million has been raised to purchase more than five million acres of wetlands for the refuge system."

The Commission approved more than \$6.4 million in Federal Duck Stamp funds to acquire land for the National Wildlife Refuge System. All acquisitions were previously approved by the affected states. *Source: USFWS Press Release 8 June 2004*

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## Re-Introduced Red Wolf Pups Thriving

The U.S. Fish & Wildlife Service (USFWS) reports that this spring was the best breeding season ever for red wolves (*Canis rufus*) in North Carolina since the species was listed as endangered in March

1967. Red Wolf Recovery Program biologists found a record 55 red wolf pups in 11 litters and added two more female puppies to the count that were born in captivity. These puppies recently were transferred from a captive facility near Charleston, South Carolina, to join the wild red wolf population in northeastern North Carolina. Just two weeks old, the sister pups were selected for their rare genes and placed in separate dens with wild red wolf pups of identical age. The captive-born sisters were adopted by wild “foster mothers” and will likely be raised within their respective packs.

Captive-to-wild fostering events are coordinated efforts by the USFWS Red Wolf Recovery Program and the American Zoo & Aquarium Association’s Red Wolf Species Survival Plan (RWSSP). Fostering is a new method of breeding that allows genetically valuable captive-born red wolf pups to become integrated into the wild red wolf population. The pups develop in the wild, so that they gain the survival skills required to mature and reproduce. Art Beyer, Field Coordinator for the Red Wolf Recovery Program, explained that the technique “is effective when the fostered pups live long enough to contribute their genes to the wild population by producing pups of their own.”

In another encouraging development this spring, the USFWS Red Wolf Recovery Program celebrated the success of a previous 2002 fostering attempt. It was this time two years ago when two pups from the North Carolina Zoological Park were placed into a wild den containing two pups of identical age. The male and female pups were successfully adopted by their wild foster mother and raised within the pack. During the following spring of 2003, the two captive-born yearlings remained with their adopted pack and helped raise a new litter of pups. This spring, biologists were hopeful that each of the zoo-born red wolves would produce litters of their own.

The male zoo-born wolf, displaced from his adopted pack and forced to establish a range of his own, was successful in securing the alpha position of another established pack, just in time for breeding season. Biologists are celebrating the discovery of a rather large litter of eight puppies that was fathered by the zoo-born male. “This event demonstrates that the captive breeding program and the free-ranging population are integral aspects of the Red Wolf Recovery Program. They still depend greatly on each other for the recovery of the species,” explains Will Waddell, Coordinator of the RWSSP Captive Breeding Program.

In mid-April, a telemetry intern detected a mortality signal from the zoo-born female’s radio tracking collar. A mortality signal is produced when a red wolf does not move for six hours. When the female’s body was recovered, all symptoms pointed to complications with pregnancy.

The red wolf is one of the most highly endangered canid species in the world. The only wild population of red wolves occurs in northeastern North Carolina, where more than 100 red wolves span 1.5 million acres. The Red Wolf Species Survival Plan Captive Breeding Program involves 36 zoos and captive facilities and manages 154 captive red wolves, including 14 newly-born pups. *Source: USFWS Press Release 20 May 2004*

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### **Heaviest Bird Returns to Britain**

Chicks of the great bustard (*Otis tarda*), which became extinct in Great Britain in the 19th century, are being reintroduced to that country in June 2004. Eggs were collected in Russia from nests threatened with destruction. Once the chicks hatch, they were transferred to England from Moscow, in early June 2004. It is planned that 40 chicks of around 1-2 weeks old will be taken to Salisbury Plain where they will be reared and then released without having seen a human.

Efforts to re-introduce what is considered to be the world’s heaviest flying bird, nearly 175 years after it died out in Britain, is the aim of the British Great Bustard Group. The great bustard was hunted to extinction in Britain, primarily to feed the landed gentry. The Great Bustard Group issued a statement saying the bird “is the missing crown of the biodiversity and natural heritage of England.”

The Group is also concerned about the chicks ability to survive once released. The adults can live for up to 20-25 years, but the survival rate for chicks in the wild is not great - 75% of them will die in their first year. “They do have a capacity for injuring themselves and the simple fact of the great outdoors is that there are a lot of things that eat each other,” said a Group spokesperson. *Source: BBC News Online 2 June 2004*

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## **Bald Eagle off Threatened List This Year Says Interior Department**

The American bald eagle (*Haliaeetus Leucocephalus*) is set to be removed from the Endangered Species List later this year, according to a spokesman for the U.S. Interior Department. Craig Manson, an Assistant Secretary for Fish, Wildlife and Parks said "It's no longer endangered, but it's still deserving of special attention."

•

Even if it is removed from the list of endangered species under the ESA of 1973, the bird will continue to be protected under the federal Bald Eagle Protection Act of 1940, which prohibits killing or selling the animals. The Interior Department intends to release as plan later this summer on how to protect the birds' habitat, while recognizing that its population has recovered. "The more species that we get off the list that are ready to be recovered, the more we can start focusing on those that are not quite there and ultimately move them off the list as well," said Manson.

Currently, there are more than 7600 breeding pairs of bald eagles in the 48 contiguous states. The effort to remove the species from the threatened list is the subject of criticism by a number of environmental interest groups, who have accused the Bush administration of failing to enforce the terms of the ESA properly. *Source: Associated Press News Story Online 18 May 2004*

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## **New Rules Regarding Incidental Take Permits Proposed by USFWS**

The USFWS recently issued re-proposed regulations regarding incidental take permits that are granted under the Endangered Species Act. The regulations outline the circumstances under which these permits can be revoked. The Service grants incidental take permits to landowners who have voluntarily agreed to develop Habitat Conservation Plans (HCP). These plans provide a framework for landowners to conserve threatened and endangered species on their property. In return, the permits give landowners authorization for incidental take of listed species resulting from their otherwise lawful development or land use activities.

The regulations governing revocation of incidental take permits were first published in June 1999 but a U.S. District Court judge ruled the Service had violated the Administrative Procedure Act by failing to provide the public with an adequate opportunity to comment. To address the court ruling the Service has published two modifications to the proposed rule. First, a final rule withdrawing the prior permit revocation regulations that the court vacated has been published in the *Federal Register*. Secondly, a proposed rule has been published that provides notice to the public and requests comments on the re-proposed regulations for revoking incidental take permits for HCPs.

While the Service has not revoked an incidental take permit associated with an HCP to date, the proposed rule clarifies the very limited circumstances when this could happen. This proposed rule would allow the Service to revoke an incidental take permit only if take of listed species caused by the permitted activity will appreciably reduce the likelihood of survival and recovery in the wild of one or more of the covered species. *Source: USFWS Press Release 26 May 2004*

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## **Boat Noise Alters Orcas**

Researchers have found that "the overwhelming rumble of engine noise from a growing fleet of whale watching boats" has caused Puget Sound orcas to change their primary calls, "the whale equivalent of shouting and repeating words to penetrate roaring background noise" reports the *Oregonian*. The number of whale watching boats increased fivefold from 1990 to 2000 and scientists say "the underwater noise pollution inflicts added stress on a population of killer whales that has been in steep decline since 1996." The study published in the journal *Nature* concludes "recent noise levels may have surpassed a critical threshold forcing whales to try to overcome competing sounds." *Source: GREENlines Issue #2099 5-3-04*

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## **Crocs Rebounding in Florida**

Scientists estimate that crocodiles (*Crocodylus acutus*) in Florida have gone from a population of about 200 some 30 years ago to approximately 800-1000 this year, reports the *Associated Press*. That number could double during summer and fall with new hatchlings. The positive increase led the U.S. Fish and Wildlife Service regional office in Atlanta to recommend the status of the croc be changed from endangered to threatened. *Source: GREENlines Issue #2124 6-08-04*

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## **Protection Delayed is Protection Denied - ESA Listing Procedures Challenged**

A new study finds that most of the 114 species that have gone extinct since passage of the ESA in 1973 were due to inaction or delays by the federal government in extending the Act's protections to them reports the *Environmental News Service*. The study by the Center for Biological Diversity found that since 1973, 88 species had gone extinct because of delays of up to 20 years after they were first identified as in trouble. "Virtually all of these species could have been saved if the ESA was properly managed, fully funded and shielded from political pressure" said the Center. The report identified 92 species that went extinct without ESA protection, the majority of which "disappeared because of lack of legal protection, recovery plans, critical habitat and recovery funding," with the largest number of extinctions occurring in the Hawaiian islands and in the western and southeastern U.S.

And in what is described as "the single largest effort to protect imperiled species in the history of the ESA," a coalition of conservation groups and renowned scientists, lead by the Center for Biological Diversity, have petitioned to have 225 candidate species finally given the Act's protection reports *Greenwire*. The petition included 1,000 pages of biological and ecological information about the plants and animals which have been languishing without ESA protection in a listing backlog - "on average, the 225 species have been on the candidate species waiting list for 17 years." The study is available on line at: <http://www.biologicaldiversity.org/swcbd/Programs/policy/esa/eesa.html> Sources: *GREENlines Issue #2093 4-23-04 and Issue #2101 5-5-04*

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## **Gorilla Habitat Decimated**

Years of civil war in the Congo have taken a tremendous toll on the eastern lowland gorilla (*Gorilla gorilla graueri*), "with the number of apes estimated to have dropped to 5,000 - down from about 17,000 in 1994" reports *Yahoo News, AP*. According to Diane Fossey Gorilla Fund International, "The rate of decline of this subspecies is unprecedented." The group is working to set up community nature reserves that will form a network of biological corridors with nearby national parks to help stabilize the gorilla population. Source: *GREENlines Issue #2099 5-3-04*

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## **Black-Footed Ferret Strategy Shifts**

Despite the release of 440 captive-raised black-footed ferrets and 191 wild births, Montana's reintroduction program has only about 23 animals to show for the 10 year, \$2 million dollar recovery effort reports the *Billings Gazette*. The major problem has been sylvatic plague, a deadly disease that has decimated both the ferrets and their primary food source, prairie dogs. Biologists, however, are "not giving up on the goal of establishing a self-sustaining ferret population in Montana" and are "shifting their focus to plague research and prairie dog populations." The USFWS hopes to begin field testing the effectiveness of "a plague vaccine that has shown promise in the laboratory." Source: *GREENlines #2105 5-11-04*

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## **China Finds More Wild Pandas**

The world's most famous endangered species, the Chinese giant panda, appears to be in much better shape than previously thought. The Chinese Government has released the results of the most comprehensive survey of giant pandas ever. It found that there were around 1,600 of the creatures left in the wild, more than 40% more than previously thought. But the figures may reflect the fact that the survey was so thorough, rather than a genuine recovery in numbers. Just 15 years ago, many environmentalists were predicting the giant panda's imminent demise. Its beloved bamboo forests in western China were disappearing fast, and only 1,000 pandas were thought to be left in the wild. On the surface at least, the latest survey represents a huge success for China's conservation efforts. But the picture is much less clear than the results might show. It has been far more comprehensive than previous studies. It covered a wider area of western China, and used much more sophisticated surveillance technologies. The pandas were tracked through their droppings, and their distribution as well as population density was mapped. China now has 40 panda reserves compared to 13 only 20 years ago. At least 95% of giant pandas in the wild are protected. Even though the news that there are more pandas surviving in the wild than previously thought is positive, it does not mean that the giant panda is out of danger, let alone that its population is on the road to recovery. According to the World Wildlife Fund, deforestation and poaching by fur trappers continue to pose a major threat to their long-term survival. Source: *BBC News 6-10-04*

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## Rangers Hired to Protect Rhinos

*The Luton News* (UK) on May 26 reported the Zoological Society of London is raising funds to hire anti-poaching rangers at the Garumba National Park in the Democratic Republic of Congo, to protect the critically endangered northern white rhino (*Ceratotherium simum cottoni*). Experts estimate there are only 30 of the rhino left living in the park. Two park guards were killed in mid-May by poachers and a guard and trainer were wounded in the all-out effort to protect the World Heritage Site of Garamba National Park, (5,000 km<sup>2</sup> National Park & 7,200 km<sup>2</sup> of Reserves ) Created a National Park in 1938, a World Heritage in 1980 and currently classified World Heritage In Danger, Garamba, with rolling savannah plains, woodlands and beautiful clear rivers, protects the last wild population of northern white rhinos and northern savanna giraffes (*Giraffa camelopardalis congoensis*) in the world and a genetically unique population of elephants, one of the densest concentrations in Africa. It is managed by a staff of 230 of the Institut Congolais pour la Conservation de la Nature, (ICCN) working in partnership with and supported since 1984, by the Garamba National Park Project, led by Kes and Fraser Smith, with the International Rhino Foundation. It is funded by a consortium of NGOs and agencies, including UNESCO/UN Foundation, USFWS and Frankfurt Zoological Society and Save the Rhino International. Situated on the northern border of DRC with South Sudan, the biggest threat to the park's ecosystem has been illegal hunting linked to the proliferation of arms and ammunition and displaced persons from the 40-odd years of civil war in Sudan and exacerbated during the last six years by the civil wars within ex Zaire/DRC. Sources: *GREENlines Issue #2120 6-02-04* and *BBC News 6-10-04*

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## Seahorse Protection Begins

The seahorse has become “the first commercially valuable marine genus” to be protected by CITES, international trade rules reports the Environmental News Service. The World Conservation Union (IUCN) lists one of the 34 seahorse species as endangered, nine as “vulnerable” and has insufficient information to assess the status of the rest but estimates indicate that some 24 million are taken out the wild for aquariums or use in traditional medicine. Additional seahorses are killed as by-catch in commercial fisheries and from pollution and coastal development. All 34 species are protected under Appendix II of CITES which requires that commercial trade not be detrimental to wild populations. Source: *GREENlines Issue #2110 5-18-04*

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## Grizzlies May Lose Endangered Species Act Protection

The U.S. Fish and Wildlife Service is making plans to remove the grizzly bear (*Ursus arctos*) from the Endangered Species List, reports the *Washington Post*. The grizzly has rebounded from a population of 200-250 in the lower 48 states in 1975 to about 1200-1400 today. The plan to delist the grizzly is a controversial one and conservationists are worried about the continued need for habitat protection and the need for a critical corridor linking Yellowstone to Canada. “The challenge bears face today is pressure from people, oil and gas development, rural sprawl, and burgeoning off-road vehicle use,” says Louisa Wilcox, director of the Natural Resources Defense Council’s Wild Bear Project. Because of the increase in grizzly bear populations in the state of Montana officials there are planning to “start work on a grizzly bear management plan for Montana Fish, Wildlife and Parks,” according to the *Missoulan*. The state is holding a series of public meetings that began in June. Developing a state management plan for the species is the first step to delisting the grizzly bear and removing the federal protections of the Endangered Species Act. “Obviously, the purpose of endangered species programs is to get a species to the point where it can be recovered and delisted. To move forward at some point, we’ll need a state management plan in place,” said Arnold Dood, of Montana Fish, Wildlife and Parks. Sources: *GREENlines Issue #2119 6-01-04* and *Issue #2116 5-26-04*

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## U.S. Donates to Help Chimpanzee Sanctuary

The United States in May donated \$77,000 to Sierra Leone’s Tacugama Chimpanzee Sanctuary for habitat restoration aimed at saving seven endangered primate species in the tiny west African state. The donation, part of which came from the US Fish and Wildlife Service, will expand the sanctuary and pay for electric fencing to encircle it, allowing 30 formerly caged chimpanzees to roam free across the 1,500-hectare (3,800-acre) enclosure. The decade of rebel war that raged in Sierra Leone until 2001 virtually wiped out the primate populations, sending seven species including the incredibly rare western chimpanzee to the brink of extinction. Source: *TerraDaily.com 5-21-04*

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*Editor’s Note: GREENlines Issues are a daily news digest from the Endangered Species Coalition about imperiled species and the people working to stop extinction. For more on what you can do visit - <http://www.stopextinction.org>*

# Aspects of a Safety Program for Zoo and Aquarium Facilities in the United States

By

Ed Hansen

Risk Management Coordinator

City of Tucson, Tucson, AZ

In this day and age it is generally assumed that most animal-related facilities would have a comprehensive Safety Program, with hazard assessments and job-specific training in place for their employees. But after I switched careers from the zoo profession to the safety profession, my research and discussions found that most animal safety programs concentrate on personal safety with regard to animal interaction, but lack attention on specific federal Occupational Safety and Health Administration (OSHA) areas of emphasis and concern.

Animal facility safety programs concentrate upon the safety of the person in direct contact with exotic and dangerous animals. This is obviously an important aspect of safety training in the zoo or aquarium field. What should receive even more attention in the facility safety program is the need for documented safety training *before* the animal keeper is expected to perform any tasks. There is also the need to conclude the training with a written performance test, and the need to provide additional training on at least an annual basis.

A zoo keeper or aquarist is covered under the OSHA Federal 29 CFR Part 1910 or General Industry Standards. Due to the nature of the job, the OSHA Standards covered under 29 CFR 1926 for the Construction Industry may also be applied. Approximately 50% of the states within the U.S. have their own "State Plan". For the most part, those states have simply adopted the Federal Standards. If you happen to work in the State of California, then the Cal-OSHA Standards are usually stricter than Federal OSHA Standards.

There are three principle areas of an effective safety program for zoos or aquariums:

1. A **Written Safety Program** that covers basic employee safety, specialized safety programs, hazard communication, evacuation plans, first aid, public safety and chain of command. This is a "living document", one that changes frequently with the addition/subtraction of species, enclosures and job titles/tasks.
2. A **Job Hazard Assessment (JHA)** should be performed for every job title within the organization and for zoo keepers, the hazards of working with chemicals, or conditions and specific species (elephants, apes, macaques) should be identified separately and the species management plans included in the program. The JHA should concentrate on the specific Personal Protective Equipment (PPE) and training needed by the employee to safely and effectively perform their jobs.
3. **Initial and Annual Safety Training** are required for basic elements of a safety program and specific training is required *before* new methods, equipment or chemicals are introduced to the employee.

## SAFETY PROGRAM

This is a dynamic document that needs *annual (minimum) review* by the safety managers and/or curatorial staff. A copy of the plan should be located in every manager's office and should be readily available to every member of your staff.

The basic elements of a written Safety Program should contain:

- A list of the management hierarchy and *current* contact phone information
- A list of staff (or reference the location where a current staff list is kept)
- A map of the facility
- Evacuation Plans (or reference to the location of these documents)
- Bomb threat, Bio-terrorism threat, Weapons of Mass Destruction (WMD) threat plans
- First Aid procedures for staff and visitors
- Location of the OSHA 300 and 300A Reportable Injury Logs and responsible party
- Copies of blank Industrial Injury reporting form(s) [or equivalent]
- Hazard Communication Program (or reference to the location of the document). This is a list of your chemical inventory, location of chemicals, MSDS and Spill Control Procedures, including the person in charge of managing the chemical and MSDS inventory.
- Employee Training Materials (or reference to the location of these documents)
- Specific *written* Animal Safety Programs (Elephant Contact, Primate Management etc., or reference to the location of these programs)
- Specific written Equipment Safety Programs (Bloodborne Pathogens, Forklift, Fall Protection, Hearing Conservation, Confined Space, Commercial Diving, etc)
- Copies of any applicable blank safety permit needed to work within the facility (Confined Space Permit, Hot Work Permit, etc.)
- A list of the training offered to employees and a synopsis of content
- A description of how all training and testing are documented and recorded
- A description of how unsafe employee actions are documented and the disciplinary procedure followed (or reference to the location of these documents). OSHA considers the internal disciplinary process to be a vital element of an effective safety program.

## JOB HAZARD ASSESSMENT

A Job Hazard Assessment (JHA) should be performed for every position in the facility. A JHA will break down every aspect of the job and the equipment and protection needed by the employee to safely perform each task. For instance, the selection of Personal Protective Equipment (PPE) needed for a keeper working with macaques will be far different than the PPE required for the Commissary Keeper.

OSHA requires that a PPE assessment cover the following areas:

- Eye Protection – OSHA has adopted the testing performed by the American National Standards Institute (ANSI). Eye protection is required PPE for employees working with chemicals. Example: disinfecting agents. It is also required for employees who are subject to a potential bloodborne pathogen exposure. Example: bodily fluids from a macaque. Eye protection will be stamped with the mark Z87.1 or starting 1 January 2004, Z87.1-2003. Both safety glasses and goggles will be stamped if they meet the ANSI Standards for impact. **Note that the use of a face shield by itself does not meet the OSHA/ANSI Standard for eye protection.** Face shields are used to protect the face, but may be used to supplement ANSI stamped eye protection.

- Head Protection – Zoo keepers and aquarists are not normally required to wear head protection when performing their daily tasks. For other maintenance workers, or when animal keepers/supervisors are performing construction-related or tree trimming tasks, only head protection marked with the ANSI Standard Z89.1 or Z89.1-2003 is approved for wear by OSHA.
- Hand Protection – Both leather and disposable latex (or equivalent) gloves should be standard issue to animal keepers. Leather protects the hands from common tasks, while the latex or latex equivalent provides protection against bloodborne pathogens. Leather alone will not provide protection against bloodborne pathogens, but latex or equivalent can be worn underneath leather to provide optimum protection.
- Respiratory Protection – Respirators are not a standard element of PPE for the zoo keeper or aquarist, but may be required for other job elements (pesticide/herbicide application) in your facility. A Respirator Program requires a specialized medical assessment and certified annual qualitative and quantitative fit testing performed by a competent person. Half mask respirators with an organic type filter cartridge are *recommended* for a pregnant animal keeper working with carnivores who risks a potential exposure to toxoplasmosis.

Suggested emphasis areas of attention for PPE:

- Skin Protection – Sunscreen and insect protection should be made available to all employees.
- Specialized Clothing – Clothing such as surgical garb, chemical suits, booties, non-conductive head/eye wear/gloves etc., are mandatory when identified by a JHA to protect employees exposed to certain hazards. With limited exceptions, the employer must provide additional equipment or clothing as identified, at no cost to the employee.
- Foot Protection – Steel toed boots and rubber steel toed boots should be standard issue for zoo keepers. For aquarists, shoes that afford the best possible traction, regardless of toe protection is preferred. Steel shank or metatarsal guards are not normally required for keepers, but may be desired for other positions.
- Hearing Protection – Hearing protection is required *only* if it is part of a Hearing Conservation Plan. A Hearing Conservation Plan calls for baseline testing for each employee and annual employee testing thereafter. The plan also requires initial site testing and monitoring by a certified Industrial Hygienist (or equivalent) and posting of the appropriate warning signs. The testing is then extrapolated over an eight-hour period. This is called Time Weighted Average (TWA) and the formula gauges the impact of the decibel level on the employee. It is important to note that ear plugs are not hearing protection and only reduce the ambient sound level by about 5db.

With the exception of prescription safety eyewear or safety shoes, employers are tasked to provide PPE for their employees at no cost. OSHA requires that Personal Protective Equipment should be readily accessible and replaced when needed. Employees should receive specific training on how to don, doff, adjust and understand the limitations of PPE. Where employees provide their own equipment, it is the responsibility of the employer to assure such equipment is adequate.



## TRAINING

A minimum of eight (8) hours of initial safety training should be offered to each new employee in the animal profession *before* they are assigned to work in the field. These are General Industry (29 CFR 1910) standards that would apply to animal facilities. They include:

- Subpart E                      Contains: **Employee Emergency Plans and Fire Prevention**
- Subpart G                      Contains: **Hearing Protection** (A Hearing Conservation Program is dependent upon analysis of the work environment)
- Subpart H                      **Hazardous Materials**
- Subpart I                      **Personal Protective Equipment** (as delineated by the Job Hazard Assessment). A Tuberculosis module should be included for those facilities with great apes and elephants
- Subpart J                      Contains: **Confined Space** training (especially for aquariums), if employees are expected to enter below ground maintenance areas, sumps or above/below ground tanks for routine service
- Subpart K                      **First Aid**
- Subpart L                      Contains: **Portable Fire Extinguishers**
- Subpart N                      **Materials and Handling**
- Subpart O                      **Machinery and Machine Guarding**
- Subpart T                      **Commercial Diving Operations** (if applicable)
- Subpart Z                      Contains: **Asbestos, Bloodborne Pathogens and Hazard Communication**

The training can be offered in any format, such as lecture, video or slides. It is recommended that the employees receive written testing on the materials (after each module or at the conclusion) and the training is documented by the employee's signature. Lesson plans, test results, and documentation should be kept on file for a minimum of three (3) years. If your facility is subject to an OSHA inspection, three years prior is usually the maximum they will look for when reviewing employee training records. Any medical testing (example: TB) or vaccinations (example: Hepatitis) documentation should be kept for the complete term of employment plus thirty (30) years.

At a minimum, a zoo keeper or aquarist should receive annual training on the subjects of Fire Protection (fire extinguishers), Hazard Communication, Bloodborne Pathogens, and Asbestos exposure. Asbestos awareness is an OSHA emphasis point and awareness training is usually dependent on the age of your facility. Asbestos Containing Materials (ACM) greater than 1% are normally found in buildings or materials constructed prior to 1972. Practical training should also be offered on Animal Escape Procedures or Plans, Facility Evacuation, and First Aid/CPR on an annual basis.

Once this training program is in place, it should be combined with a plan for facility audits (internal safety inspections) that look for potential workplace hazards. Once you have these basic elements in place, then you have the foundation for an effective Safety Program.

# Chapter News Notes

## AAZK Welcomes Three New Chapters

We are pleased to welcome three new Chapters into this Association. Newly chartered Chapters include:

*Tucson Chapter*, Reid Park Zoo, 1100 S. Randolph Way, Tucson, AZ 85716. Their officers are:

President.....Alisha Brewer  
Vice President.....Stacey Belhumeur  
Secretary.....Cassie Rogge  
Treasurer.....Becca Lohse  
Chapter Liaison.....Mark deDenus

*Naples Chapter of AAZK*, Caribbean Gardens, 1590 Goodlette-Frank Rd., Naples, FL 34102. Their officers are:

President.....Jeremy Neufeld  
Vice President.....Bonnie Young  
Secretary.....Tarah Brinkerhoff  
Treasurer.....Stephanie Huston

*California Desert Chapter of AAZK*, Living Desert Zoo and Gardens, 47900 Portola Ave., Palm Desert, CA 93360-6156. Their officers and new logo are included in their very first Chapter News Notes submission which follows.

## California Desert Chapter of AAZK

We are proud to announce the formation of the California Desert Chapter of AAZK. Already there are nearly two dozen members including employees, docents, and volunteers of the Living Desert Zoo and Gardens.

We kicked off our new Chapter with a presentation by Diana Guerrero, Independent Behavior Consultant from ArkAnimals, Inc. As well as speaking about her new book, Diana offered advice regarding training methods for our zebra stallion. This event raised close to \$100 through a book raffle and donations.

Our most recent event was our 5th Annual Zookeeper Olympics on 6 May. The Living Desert Animal, Garden and Education departments are broken into five diverse teams in

which each team collaborated to create a game incorporating daily tasks of 1,2, or all 3 departments. Spectators included Living Desert staff members, volunteers as well as our local newspaper and local CBS news station. The event was a high success, raising over \$100.



Our new logo shown above was designed by Living Desert Animal Care Supervisor Wendy Enright.

Our officers for 2004 are:

President.....Jeremy Konwiser  
Vice President.....Grady Beck  
Secretary.....Nicole Hernandez  
Treasurer.....Michelle Moe  
“Den Mother”.....Maureen McCarty  
Liaison.....Mike Chedester  
Advisor.....Amy Roberts

## AAZK Milwaukee Chapter

In February, we held our annual Valentine’s Day bake sale to raise funds for the operations of our Chapter. We managed to rake in \$235.00. Unfortunately, business was kind of slow due to fewer bakers and buyers who had extra busy schedules. Nevertheless, funds were raised.

On a brighter note, this last April we had our Bowling For Rhinos event. We managed to raise \$1113.25 for donation to the project. Many strikes and gutter balls were bowled, all for a good cause.

Soon, our zoo will have its annual Conservation Weekend. This year’s theme that our Chapter will present is “Backyard Habitats”, where we promote what people can do to help the environment and local wildlife in their own backyards.

--Earl Conteh-Morgan, Liaison

## Greater Houston AAZK Chapter

The Greater Houston Chapter would like to announce the following new officers:

Vice President.....Stephanie Bledsoe

Liaison.....Stephanie Nageotte

The Houston Zoo hosted their first Enrichment Day on April 3<sup>rd</sup>, coordinated by carnivore keeper Carolyn Matthews-Borak. Booths were set up around the Zoo to educate guests about animal enrichment and the Zoo's enrichment program. A booth was set up by Pets-o-Plenty, a local pet store, where guests could purchase enrichment items for the animals of their choice. There were also many activities for children.

GHCAAZK's booth educated guests about how animal painting is used as part of the enrichment program. The paintings were sold with all proceeds to be used by keepers to purchase enrichment items. Keeper talks were given in all areas of the Zoo with special demonstrations of animal enrichment. Congratulations to Carolyn and everyone who helped make this a successful event.

Our Chapter is now busy coordinating our 14<sup>th</sup> annual Bowling For Rhinos event to be held July 24<sup>th</sup>. Jennifer McLain, Chapter President, along with the BFR committee members, is working hard to make this the best BFR to date. This year's goal is to raise \$10,000 for BFR!

—Stephanie Nageotte, Liaison  
Greater Houston Chapter AAZK

## CHAPTER LOGOS

Does your Chapter have a new logo? Please keep us up-to-date if you change your Chapter logo.

Also, new Chapters are encouraged to send in a copy of their logo as soon as they adopt one.

Logos may also be sent as graphic file attachments (tiff or jpeg) to the email address listed below.

We will be producing another Chapter Logo Registry in 2005, so make certain the logo in our file is your most current one. When sending in logos, please include name of the artist/designer, date logo was adopted, and what, if any, significance is in the design - animals represented, etc.

**What's your AAZK Chapter been up to? Send your Chapter News to the Editor at:  
[akfeditor@zk.kscoxmail.com](mailto:akfeditor@zk.kscoxmail.com)**

## **MOVING?**

Please let us know when you change your address! It now costs AAZK about \$1.00 every time an *AKF* is returned because of an incorrect address. We have more important things to spend the Association's money on! Please call 1-800-242-4519 (U.S.) or 1-800-468-1966 (Canada). If you should get the answering machine, please speak slowly and clearly when giving your address change. Or you may email your address changes to: [aazkoffice@zk.kscoxmail.com](mailto:aazkoffice@zk.kscoxmail.com)

**THANKS !**



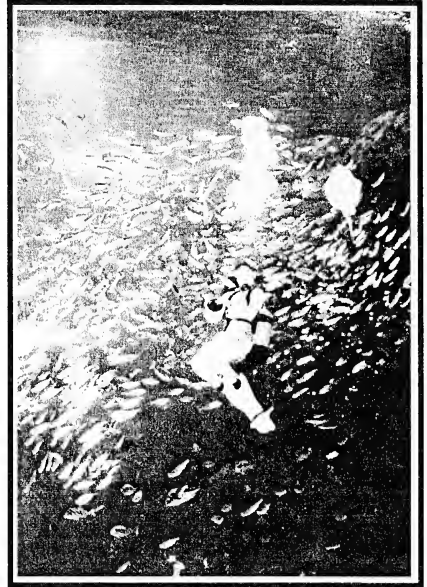
By Kako Y. Yonetani - ZooDEL  
Zoo Design & Education Lab  
Kobe, Japan

The Enoshima Aquarium, the newest aquarium in Japan, opened to the public in April 2004. It is an entirely new building, however an older such facility has existed on this site for about 50 years. This Aquarium consists of two stories with the following various exhibits accessible from the entrance bridge:

- **SAGAMI BAY ZONE** has dynamic dioramas of the sea around this area and many tanks that tell of the crucial interconnection between humans and sea life, and of the importance of respect for all life. Be sure to watch the lecture show and educational demonstration by divers in the large Sagami Bay tank where some 8000 sardines swim in a huge school!

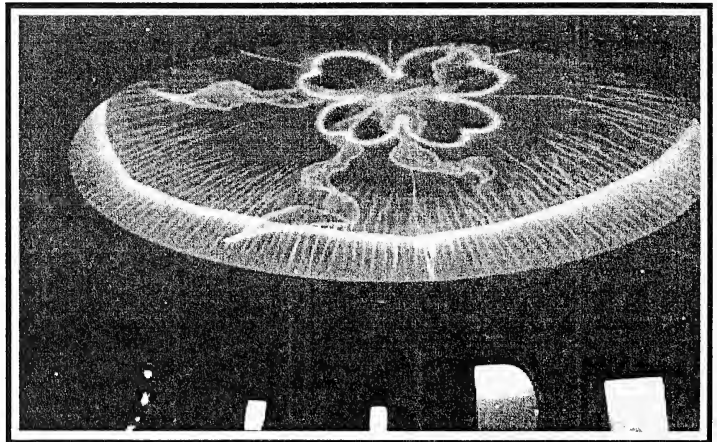
- **DEEP-SEA CORNER** – About 99% of all seas are classified as “deep sea” which is home to marvelous creatures that defy the imagination. Based on the findings of joint research with the Japan Agency for Marine-Earth Science and Technology, this Corner always presents a state-of-the-art display of deep-sea life, and features the first DEEPAQUARIUM ever to be installed in the field of aquaria.

- **JELLYFISH FANTASY HALL** – Here is one of the world’s best displays of jellyfish. The old Enoshima Aquarium was very famous for their species’ research and exhibits in the past. From the beautiful sleek forms of the jellyfish, we can make precious discoveries about the mysterious origin of life, about what is really necessary for survival, and about what must be done to avoid our own destruction.



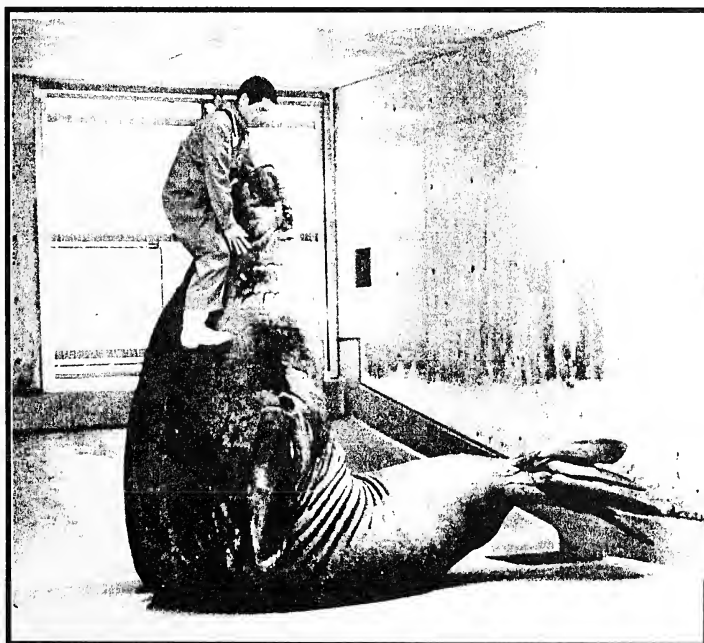
**Sagami Bay Tank**

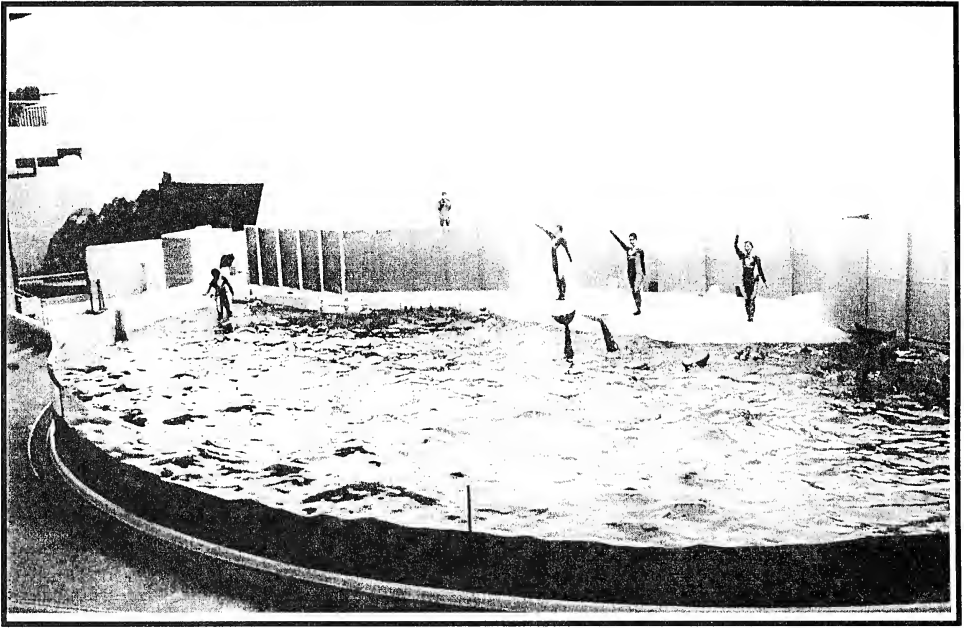
**Jellyfish Fantasy**



- **COLD & WARM SEA ZONE** – The seas off Japan are enriched by the meeting of the cold Oyashio [Kurile] Current (= an ocean current in Japan) carrying ice flows from the north and warm Kuroshio [Black] Current coming up from the Equator. The Zone takes visitors on a trip from the icy northern ocean to the striking coral reefs in the south, giving them a glimpse of the global environment and the world's biodiversity.
- **RESEARCH LAB BY HIS MAJESTY AKIHITO** – The research-works by their Majesties the late Emperor Hirohito and the reigning Emperor Akihito in the area of marine biology were carried out mainly in the vicinity of the Imperial Villa at Hayama near the Enoshima area of the coast of Sagami Bay. Of particular note is the display of hydrozoans.
- **PENGUIN & NORTHERN FUR SEAL ZONE** – Although the chilly waters of the Arctic and Antarctic lie far from Japan, both the Arctic fur seals and Antarctic penguins have a special place in the Japanese heart. Enjoy their unique antics! In the future a sea otter exhibit may be added to this zone.
- **BEACH EXPERIENCE HALL** – Helps the visitor learn about the sea and marine life through a hands-on approach while having lots of fun in the process! This educational facility is a unique one in Japanese aquarium-world.
- **SHOW STADIUM** – This is an additional highlight zone at this Aquarium. There are two pools for dolphins, pilot whales and harbor seals including the largest southern elephant seal in Japan at the present moment (10-year-old male weighing about two tons at 5m in length). This elephant seal performs training acts with his Keeper making him a very talented marine mammal indeed. The Dolphin Pool serves as a show arena in a breath-taking location offering views of Mt. Fuji and Enoshima Island across Sagami Bay. The show is spectacular entertainment accented by the scenic natural surroundings of the sand beaches. The dolphin show was originated at the old Enoshima Aquarium and was the first of its kind in Japan – an important fact in aquaria history.

**Southern Elephant Seal and Trainer**

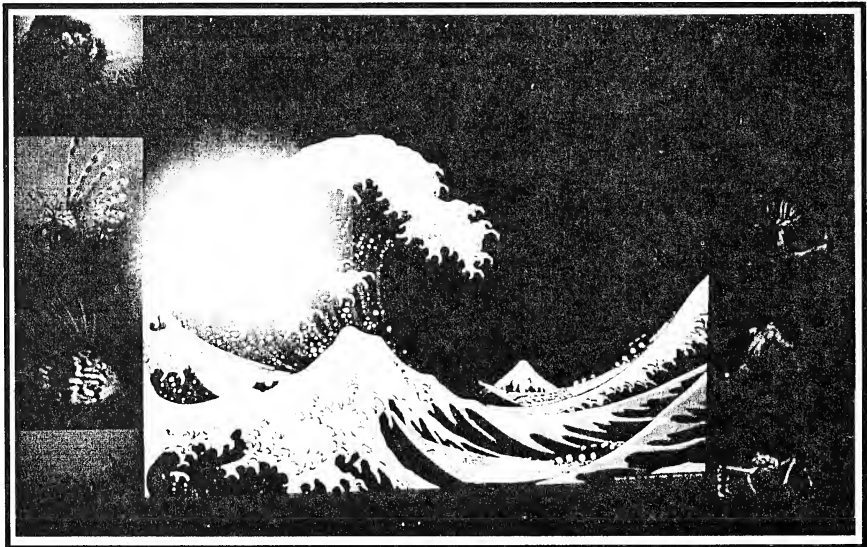




### **Dolphins and Trainers in the Show Stadium**

• **TOUCHING POOL** – This is outside the Enoshima Aquarium on the beach. At the Pool visitors can come into contact with creatures that came from the sea while listening to the sound of the nearby waves.

This fascinating Aquarium is arranged compactly as just Japanese size. There is access by train from Tokyo Station. Japan Railway is convenient taking a little over an hour to reach the Aquarium from Tokyo Station. Their website is <http://www.enosui.com><



**This Japanese antique picture is an example of the Aquarium's graphics**

**Photo credit: All photos provided by the author.**

*Institutions wishing to advertise employment opportunities are asked to send pertinent data by the 10th of each month to: Opportunity Knocks/AKF, 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054. Please include closing date for positions available, and when setting these dates keep in mind that because of bulk-mail, most readers do not receive their AKF until the middle of the month or later. There is no charge for this service and fax or e-mail listings of positions which become available close to deadline are accepted. Our Fax is (785) 273-1980; e-mail: akfeditor@zk.kscoxmail.com< Listing must be sent as MS Word attachment. To post a position on the AAZK website, have listing to email address above by the 25th of the month for posting on the first day of the following month. We are no longer located at the Topeka Zoo, so please note new address to avoid delays in processing.*

### **Zookeeper/Herpetology** - Houston Zoo, Inc., Houston, TX

The Houston Zoo is seeking a qualified individual for a full-time position as a zoo keeper in the Herpetology section. To apply for this position, visit our website at [www.houstonzoo.org](http://www.houstonzoo.org)< Scroll down from the "About the Zoo" section until you reach zoo careers. Applications can be downloaded from there.

**Responsibilities:** Attends to all aspects of daily animal husbandry, display maintenance, and visitor service for a large and diverse collection of reptiles and amphibians in a major zoological institution; reports animal medical problems to supervisor and assists veterinarians and technicians with administering medical treatments. Reports facility and maintenance problems to supervisor; writes clear, concise reports and maintains accurate records on animals in section; develops and participates in educational presentations to enhance the visiting experience for the zoo guest; and participates in and supports collaborative efforts pertaining to the herpetology collection, such as reproduction of selected species, research, and conservation programs. **Qualifications and Experience Required:** High school diploma or GED required. College degree in a biological field preferred; previous experience with reptiles and amphibians; experience with venomous species preferred; must be team-oriented and willing to work with other staff members to further the goals of the Herpetology section; must be willing to work weekends, holidays, or extended hours when required; must be able to lift at least 50 pounds; this position may also require other physical demands such as bending, stretching, climbing, etc; must be willing to work in extreme weather conditions (heat, cold, rain, etc.) and with potentially dangerous animal species (venomous reptiles, large boas and pythons, crocodylians, etc.); and carpentry and mechanical skills are helpful.

### **Animal Caretaker/Resource Naturalist** - Calusa Nature Center and Planetarium, Fort Myers, FL

Must email resume and cover letter to [Michael@CalusaNature.com](mailto:Michael@CalusaNature.com). No calls please. Visit website at [CalusaNature.com](http://CalusaNature.com)< **Responsibilities:** Responsible for overseeing the Center's collection of live animals. Responsibilities include live animal resource acquisition, care and maintenance. The Resource Naturalist ensures that all center animals are cared for and maintained according to all legal requirements, and that live animal exhibits are in good condition. Staff serve as an ambassador for the Calusa Nature Center and Planetarium. Reports to Executive Director. Maintains all Calusa Nature Center and Planetarium animals in compliance with all State and Federal regulations. Ensures that all resources necessary for natural history and operations are acquired and maintained in good working order. Present daily live animal programs or "Meet the Keeper" presentations to a small audience of visitors. Maintain visibility and strengthen the image of the Calusa Nature Center and Planetarium by serving as a community resource for natural history issues and by carrying out positive community relations activities. Provide other operational support services for Calusa Nature Center and Planetarium programs as requested by the Executive Director. **Requirements/Qualifications:** Bachelors Degree in zoology, biology, environmental science or a related field equivalent training and knowledge. Three (3) years full-time experience. Experience to carry permits for the care of venomous snakes, alligators, crocodiles, birds of prey, and mammals such as bobcat, raccoon and opossum. Strong organizational, problem-solving, teaching and computer skills. Ability to work effectively both independently and as a team player. Willingness and capability to work weekends and holidays. Cheerful and outgoing demeanor. Be neat and clean in work areas and creative with exhibit designs. It is a physically demanding position that requires working outdoors in the Florida weather. Salary Range: \$25-30K with full benefits.

### **Zoo Keeper (Elephant and Large Mammal)** - The Toledo Zoo, Toledo, OH

For consideration submit resumés using only one of the following three (3) methods: Mail to - Re: Zoo Keeper, The Toledo Zoo, P. O. Box 140130, Toledo OH 43614-0801; email to - [hr@toledozoo.org](mailto:hr@toledozoo.org) or Fax: (419) 389-8670. The Toledo Zoo has had a Free Contact elephant management program for over 20 years. This has included a successful reproductive program using artificial insemination, and the birth of a male calf. Future planning includes an exhibit expansion to house the calf and training is in progress for FC & PC management of the bull calf. The Elephant Management Team utilizes the S.T.A.R.S. (Standardized Training and Reinforcement System) program. Additionally, the Zoo is searching for another reproductively sound female African elephant for the collection. **Responsibilities:** primary responsibilities will include all facets of elephant care, but may also include care of other animals in a diverse large mammal collection. These responsibilities include: care/observation of animals, cleaning/maintenance of exhibits, training/enrichment, and record maintenance. **Requirements:** The Toledo Zoo is accepting resumés from those dedicated to, and willing to work and communicate within a team-oriented environment.



Only those candidates fulfilling the requirements of a minimum of one (1) year paid work experience in a free contact elephant environment will be considered. Prefer a degree in a related field, but experience may be considered in lieu of a degree. Must have a valid driver's license and be insurable by the fleet insurance carrier. The starting hourly rate is \$12.34 per hour with progressive increases and an excellent benefits package. The Toledo Zoo is an Equal Opportunity Employer and participates in a Drug & Alcohol Free Workplace program. **Position will remain open until filled.**

#### **Animal Keeper** – Buffalo Zoo, Buffalo, NY

Submit resumé and cover letter to: Kevin J. Murphy, Buffalo Zoological Gardens, 300 Parkside Avenue, Buffalo, NY 14214. The Buffalo Zoo is accepting applications for an Animal Keeper to work in its brand new sea lion/otter facility scheduled for completion September and November 2004. **Responsibilities:** Will work daily in the husbandry, training, handling and enrichment of California sea lions and river otters. **Requirements:** The Zoo is seeking a highly motivated keeper/trainer that thrives in a team environment. Must obtain a NYS non-CDLC driver's license upon completion of probation. The selected candidate will have excellent record keeping skills. Position requires an AAS degree (bachelor's preferred) in a zoology/biology related field. One (1) year paid experience in the husbandry/training of pinnipeds required. Public speaking experience and familiarity with aquatic life support systems required. Scuba certification a plus. EOE.

#### **Area Supervisor** – Wildlife Waystation, Angeles National Forest, CA

This position, which is available immediately, will be paid commensurate with experience. Please e-mail cover letter and resumé to [cj@wildlifewaystation.org](mailto:cj@wildlifewaystation.org) **Responsibilities:** Supervise both section keepers and volunteers in the care, feeding, cleaning and enrichment of an eclectic assortment of wild and exotic animals. (i.e.: bears, primates, large cats, coyotes). **Requirements:** Will work closely with veterinary staff and must have good people and organization skills. Must have prior paid animal experience including a working knowledge of USDA husbandry regulations. TB test and blood panel required prior to beginning work.

#### **Aviculture Interns** - Hawaiian Endangered Bird Conservation Program

Program is at the Keauhou Bird Conservation Center (KBCC) on the Big Island of Hawaii and the Maui Bird Conservation Center (MBCC) in the island of Maui. For more information on internships at KBCC, please send a resumé, cover letter, and the names and contact information of three (3) references to: Tracey Goltz, P.O. Box 39, Volcano, HI 96785 or fax (808) 985-7034. For more information on internships at MBCC, please send this same information to: Mary Schwartz, 2375 Olinda Road, Makawao, HI 96768 or fax to (808) 572-3574. PLEASE, no phone calls or emails. **Responsibilities:** daily tasks include husbandry duties such as diet preparation, aviary and facility maintenance, behavioral observations of breeding birds, grounds keeping and predator control. **Requirements:** applicant must be able to live with several roommates in a remote area and should show enthusiasm for work with captive endangered Hawaiian birds. Applicant must have a valid driver's license and health insurance. Internships last for a 3-6 month period and interns receive \$20/day stipend plus housing.

#### **Big Cat Internships** - Tiger Creek Wildlife Refuge (TCWR), Tyler, TX

As seen on Animal Planet in "Growing Up Tiger", TCWR is a division of Tiger Missing Link Foundation. **Commencement date:** On-going duration: three (3) months on a month-by-month basis. Summer (May-Aug) Internship Applications due March 1st. For contact information, application packet, additional information, and to see what past interns have to say about Tiger Creek: visit [www.tigercreek.org](http://www.tigercreek.org). Are you interested in learning more about big cats or establishing a career path working in conservation as a zookeeper, a wildlife manager or a veterinarian? You can earn your STRIPES at Tiger Creek and obtain college credit through your college or university at the same time. Right now there are up to three (3) positions available consisting of a six (6)-day work week with a strong commitment for three (3) months. At Tiger Creek you are more than a worker, you are considered a friend and we strive to build long-term working relationships as we know you are the future animal caretakers! Based upon your performance after your training, you may be eligible for any permanent animal care positions that become available. **Requirements:** At least 20 years old and a junior in college. You should be capable of paying attention to details and following safety rules; you must have your own transportation to and from Tyler, TX; and you also provide your own food while here. We provide room; uniforms; materials and curriculum; and indoctrination and safety training. The Intern House has central heat and air, a full kitchen, a shared telephone line for incoming calls, Internet access for email and surfing, a TV with VCR/DVD, even satellite so that you and the other interns can enjoy Animal Planet during your off hours! The intern house is fully furnished and dormitory-style with rooms being shared by two people. All of this and a few rescued dogs or puppies in the backyard...because we want your stay to be as comfortable as possible while here at Tiger Creek. The Tyler/East Texas area has a lot to offer, there is horseback riding available at no cost to our interns, lakes within beautiful parks, movie theaters, numerous local night clubs and plenty of restaurants and much more.



**Environmental Interpretation and Wildlife Care Internship** – Trailside Museums and Wildlife Center, Bear Mountain State Park, Bear Mountain, NY 10911-0427. Contact: Jennifer Verstraete at (845) 786-2701 ext. 278 or 265; email – elayne.keith-feller@oprhp.state.ny.us< Start Dates: Summer internship mid-May through mid-August; Fall internship late-August/early September through early November. Internship is unpaid, but provides knowledge and experience; written evaluation gladly given. Possible course credit if intern can arrange it. Interns will work at least three (3) days a week, including one weekend day. No housing available. We reimburse full payment for required pre-exposure rabies series. **Qualifications:** Enthusiasm, comfortable handling animals, motivated to learn. Must be 18 or older; preference given to college student looking for experience in the care of wildlife and in environmental interpretation. **Responsibilities:** 1) Provide care for permanently injured or orphaned park wildlife (mammals, birds, fish, amphibians and reptiles) in zoo setting. Under the supervision of a Senior Zookeeper will prepare food and diets, maintain enclosures and exhibits, and provide enrichment; 2) Interact with the public answering questions, interpreting exhibits, possibly developing and offering short interpretive talks.

### **Reptile Internship**

To apply send a cover letter, resumé, and at least two (2) (preferably 3) references to: Kristen Wiley, Internship Coordinator, Kentucky Reptile Zoo, 200 L & E Railroad, Slade, KY 40376. Or send via email to: kyreptil@pop.mis.net< Starting dates are flexible, but a minimum commitment of three months covering SPRING (April-June ), or SUMMER ( June - August), or FALL ( September - November) is required. Deadlines for applications each year are: SPRING - February 1st; SUMMER - March 1st; and FALL - June 1st. The Kentucky Reptile Zoo, a nonprofit organization, is seeking a student intern for the 2004 Fall season. The zoo is an educational exhibit, reptile breeding and venom research facility located near Kentucky's Red River Gorge and Natural Bridge State Park. **Responsibilities:** The intern will assist in the captive maintenance of the zoo's reptile collection, collect admissions to the exhibit, give interpretive talks and interact with the public, assist with educational outreach programs, and perform other duties as assigned. In addition, the intern will be responsible for the completion of at least one research project related to the field of herpetology. The intern will **not** be involved in the handling of any venomous reptiles. **Requirements:** Desirable qualifications include a willingness to handle snakes and other reptiles on a daily basis, ability to communicate effectively with people, writing skills, orientation to details, and self-motivation. The intern will be required to work both Saturday and Sunday, with days off during the week. Students majoring in the biological or natural sciences are preferred. Interns are required to be either college students or recent graduates. Former interns have arranged for academic credit with their institutions. Interns have also been successful in finding zoo keeper positions, with a hire rate of over 95%! Benefits include experience with the most extensive and diverse collection of snakes in the United States, housing, and \$55/week to cover expenses. Personal transportation is recommended. A valid driver's license is required.

### **Big Cat Internship** – Wildlife on Easy Street, Tampa, FL

For more information contact Scott Lope at 813-323-5991 or email at [catfotol@aol.com](mailto:catfotol@aol.com) Two (2) positions available for six-month internship at TAOS accredited non-profit big cat sanctuary. [www.wildlifeoneasystreet.com](http://www.wildlifeoneasystreet.com)< **Responsibilities** (include but are not limited to): daily husbandry, exhibit cleaning, diet preparation, feeding, operant conditioning and behavioral enrichment for the following species: lions, tigers, leopards, cougars, lynxes, servals, caracals, bobcats, lemurs and other exotic animals. We provide invaluable hands-on experience, on-site housing and utilities, safety training and educational materials. Advanced training and long-term employment opportunities exist for the right candidates. **Requirements:** applicants must be willing to work six days a week, some holidays and follow strict safety guidelines. Hard work ethic and love of animals more important than degree.

### **Internships** - The Florida Aquarium, Tampa, FL

Internships are available in Animal Health, Animal Programs and Husbandry departments. Internships available year-round for varying lengths of time and can be tailored to the individual student's needs. Internships are unpaid but provide valuable hands-on experience. Interested persons should send resumé to: Human Resources, 701 Channelside Dr., Tampa, FL 33602. For more information visit our website at [www.flaquarium.org](http://www.flaquarium.org)< **Responsibilities:** food preparation, feeding, cleaning enclosures, assist with medical procedures, animal observations, daily record keeping, enrichment activities, assist with training sessions and shows.

### **Zoo Design Internship** - ZooLex, Vienna, Austria

In 2002 the ZooLex Zoo Design Organization started to offer internships. Carlyn Worstell was our first intern. She finished her internship with the ZooLex Zoo Design Organization in September 2003 and is now working with the Wildlife Conservation Society at Bronx Zoo. We offer internships in Vienna, Austria. Interns who stay for a few weeks only, mainly work on the ZooLex Gallery. Interns who stay longer also complete a research project. You will find more information on ZooLex internships here: <http://>

www.zoolex.org/intern.html< ZooLex Zoo Design Organization is a non-profit organization registered in Austria. ZooLex runs a professional zoo design website and distributes a newsletter. More information and contact: <http://www.zoolex.org/home.html>

**The following three (3) internship opportunities are available at the New Jersey State Aquarium -** The New Jersey State Aquarium husbandry department is currently holding open enrollment on all our internships.

### **Avian Internship**

Interested candidates should submit a cover letter and resumé, transcripts, three (3) letters of recommendation, and an application from our website at [www.njaquarium.org](http://www.njaquarium.org). Please submit materials to: New Jersey State Aquarium, c/o Kyla Fox, One Riverside Drive, Camden, NJ 08103. Become familiar with daily activities involving our colony of African penguins, exotic birds, and reptile collection. **Responsibilities:** Duties include food preparation, exhibit maintenance, and creation of enrichment devices. **Requirements:** Candidates should be comfortable with public speaking and have course work in biology/psychology. Must be able to work outdoors and lift 50 pounds. Interns are required to complete a minimum of 120 hours and must be registered for college credits in either a two or four-year school. Internships may be completed during spring, summer, or fall sessions. All intern positions are on a volunteer basis and are unpaid.

### **Marine Mammal Internship**

Interested candidates should submit a cover letter and resumé, transcripts, three (3) letters of recommendation, and an application from our website at [www.njaquarium.org](http://www.njaquarium.org). Please submit materials to New Jersey State Aquarium, c/o Collette Caprio, One Riverside Drive, Camden, NJ 08103. Learn daily activities involving animal care and training with our Seal Team. **Responsibilities:** Duties include food preparation, exhibit cleaning, creating enrichment devices and observing training. **Requirements:** Candidates should be comfortable with public speaking, have course work in biology/psychology, prior animal experience, be able to work outdoors, and lift 50lbs. Interns are required to complete a minimum of 120 hours and must be registered for college credits in either a two or four-year school. Internships may be completed during spring, summer, or fall sessions. All intern positions are on a volunteer basis and are unpaid.

### **Fish and Invertebrate Internship**

Interested candidates should submit a cover letter and resumé, transcripts, three (3) letters of recommendation, and an application from our website at [www.njaquarium.org](http://www.njaquarium.org). Please submit materials to New Jersey State Aquarium, c/o Nicole Grandinetti, One Riverside Drive, Camden, NJ 08103. The Fish and Invertebrate department offers internships each semester to qualifying candidates. **Responsibilities:** The intern's main responsibilities will be assisting the biologists with their daily duties including exhibit and holding tank maintenance, food preparation, feeding, filter maintenance, and learning all aspects on maintaining saltwater exhibits. **Requirements:** Interns must complete 120 hours within the semester working two eight-hour days. The typical hours for the day are from 7:30am to 4:30pm. Interns are also required to be registered for credits through a two or four-year institution. All Interns work under a volunteer basis and are unpaid.

More Zoo vacancies can be seen by visiting:

American Zoo and Aquarium Association - Job Listings  
<http://www.aza.org/JobListings/>

American Association of Zoo Keepers - Opportunity Knocks  
[http://www.aazk.org/aazknew/animalKeepersForum/opportunity\\_knocks.asp](http://www.aazk.org/aazknew/animalKeepersForum/opportunity_knocks.asp)

European Association of Zoos and Aquaria - Vacancies  
<http://www.eaza.net>

Berufsverband der Zootierpfleger e.V  
<http://www.zootierpflege.de>

# AAZK Membership Application

check here if renewal [ ]

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*Those not connected with  
an animal facility*

**\$65.00 or up - Individuals  
Contributing/Canada**

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(requires Board approval)*

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Mail this application to: AAZK Administrative Offices, 3601 S.W. 29th, Suite 133 Topeka, KS 66614-2054. Make checks/money orders payable to AAZK, Inc. Must be in U. S. FUNDS ONLY. Membership includes a subscription to *Animal Keepers' Forum*. The membership card is good for free admission to many zoos and aquariums in the U.S. and Canada.

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# ANIMAL KEEPERS' FORUM



The Journal of the American  
Association of Zoo Keepers, Inc.

**AUGUST 2004**

**Managing Editor:** Susan D. Chan • **Associate Editors:** Kayla Grams, Grand Junction, CO & Mark de Denus, Reid Park Zoo • **Enrichment Options Coordinators:** Dawn Neptune, Utah's Hogle Zoo & Rachel Cantrell, Disney's Animal Kingdom • **Legislative/Conservation Outlook Column Coordinator:** Georgann B. Johnston, Sacramento, CA. • **ABC's Column Coordinator:** Diana Guerrero, Big Bear Lake, CA • **Reactions Column Coordinator:** William K. Baker, Jr., Little Rock Zoo

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**AAZK Executive Director:** Ed Hansen, AAZK, Inc., Topeka KS  
also serves as AAZK Liaison to the American Zoo & Aquarium Association (AZA)

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### **AAZK PUBLICATIONS - CONTINUING DATA COLLECTION**

Biological Information (formerly Biological Values), 4th Edition - Jan Reed-Smith, Columbus Zoo

AAZK Enrichment Notebook 3rd Edition - Lee Houts, Folsom City Zoo

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30th Anniversary  
1974 - 2004

## About the Cover.....

This month's cover features a Shoebill Stork (*Belaeniceps rex*) drawn by Richard Angubo of the Uganda Wildlife Education Centre, Uganda, East Africa. This large, stork-like bird is recognized by its enormous hook-tipped bill (its scientific name means "whale's head"). In the wild it occurs only in the freshwater swamps of East and Central Africa, living either singly or in pairs, remaining most of the time in the areas of marshland. The species is non-migratory. They are highly territorial in and out of breeding season, with males inflicting serious harm on intra- and inter-specific intruders that violate the communication codes. An attack is normally preceded by violent threat displays and loud vocalizations. They sometimes feed in wet grasslands or shallow waters, but favor hunting grounds in deep marshes and rivers or lakeshores choked with vegetation. When hunting, a shoebills walks slowly and deliberately, often climbing over floating vegetation spreading its weight on its long straight toes. Favored foods are lung and cat fishes. It builds its nest among the tall reeds on an islet or mass of floating plants. The nest is an accumulation of reeds more than three feet high on which the female lays one or two grayish eggs. This species reaches a height of 4 ft. (1.2m) with a wingspan of 8 1/2 ft (2.6m). The Uganda Wildlife Education Centre maintains 3.1 shoebills. Thanks, Richard!

Animal Keepers' Forum publishes original papers and news items of interest to the animal keeping profession. Non-members are welcome to submit articles for consideration. Articles should be typed or hand-printed and double-spaced. Authors are encouraged to submit their manuscripts on a disk as well as in hard copy form. Manuscripts submitted either on disk or electronically as attachments to an email should be submitted in Microsoft WORD. All illustrations, graphs, charts and tables should be clearly marked, in final form and should fit in a page size **no greater than 5.5" x 8.5"** (14cm x 22cm). Literature used should be cited in the text (Brown, 1986) and alphabetically in the final bibliography. Avoid footnotes. Include scientific name (as per ISIS) the first time an animal name is used. Thereafter use common name. Use metric system for weights and measurements (standard equivalents may be noted in parenthesis). Use the continental dating system (day-month-year). Times should be listed as per the 24-hour clock (0800, 1630 hrs. etc.). Glossy black and white **or** color prints (minimum size 3" x 5" [8cm x 14cm] ) are accepted. Clearly marked captions should accompany photos. Please list photo credit on back of photo. Photographs may be submitted electronically as either JPEG or TIFF file attachments.

Articles sent to Animal Keepers' Forum will be reviewed by the editorial staff for publication. Articles of a research or technical nature will be submitted to one or more of the zoo professionals who serve as referees for AKF. No commitment is made to the author, but an effort will be made to publish articles as soon as possible. Lengthy articles may be separated into monthly installments at the discretion of the editor. The editor reserves the right to edit material without consultation unless approval is requested in writing by the author. Materials submitted will not be returned unless accompanied by a stamped, self-addressed, appropriately-sized envelope. Telephone, fax or email contributions of late-breaking news or last-minute insertions are accepted as space allows. Phone 1-800-242-4519 (US); 1-800-468-1966 (Canada); FAX (785) 273-1980; email is akfeditor@zk.kscocmail.com<

**Deadline for each regular issue is the 10th of the preceding month.**

**Dedicated issues may have separate deadline dates and will be noted by the editor.**

Articles printed do not necessarily reflect the opinions of the AKF staff or the American Association of Zoo Keepers, Inc. Publication does not indicate endorsement by the Association.

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E-Mail Addresses: You may reach Barbara Manspeaker at AAZK Administrative Offices at: aazkoffice@zk.kscocmail.com< You may reach Susan Chan and Animal Keepers' Forum at: akfeditor@zk.kscocmail.com<

**AAZK Website Address: [www.aazk.org](http://www.aazk.org)**

**BFR Website: <http://bfr.aazk.org>**



# ***Scoops & Scuttlebutt***



## **Roger Williams Chapter Donates to Adopt-a-School Program**

The members of the Roger Williams Park Zoo AAZK Chapter recently sent in a check for \$250.00 to support the efforts of the AAZK Adopt-a-School program which helps provide a lunch program for the Leparua School at the Lewa Wildlife Conservancy in Kenya (see update of this program on page 323 of this issue of *AKF*). Our thanks for this generous donation to a most worthwhile program.

## **ADT Form Printing Once Again Underwritten by Columbus Zoo**

We wish to thank the Columbus Zoological Park Association, Inc. and their Conservation and Collection Management Committee for their generous underwriting of the printing of 5000 copies of the 2004 Animal Data Transfer Form (ADT Form). AAZK provides these forms gratis to the zoo community for use whenever an animal is shipped from one institution to another. The information provided on the ADT Form allows for a smoother transition for both the animal being shipped and the receiving institution's staff. We thank the Columbus Zoo for their continued support of this important project. If your institution is not already using the ADT Form, please encourage them to consider doing so. The forms are available from AAZK Administrative Offices in Topeka, KS and will soon be available for download from the AAZK website.

## **Blue Rhino Continues Support of Bowling for Rhinos**

AAZK, Inc. has received another check for \$5,000.00 from Blue Rhino Corporation which represents the second installment of the \$20,000.00 pledge the company has made in support of the 2004 Bowling for Rhinos. The first \$10,000.00 will go to the Lewa Wildlife Conservancy and the second \$10,000.00 will go to the International Rhino Foundation for dispersal to the rhino sanctuaries in Indonesia. A big THANK YOU to the great folks at Blue Rhino Corporation for their belief in and support of AAZK's Bowling for Rhinos program!

## **Rhino Newsletter Available Free Online**

Save the Rhino International has an e-zine available free to all those interested in rhino conservation. Those interested may subscribe to RhiNEWS at - [http://www.savetherhino.org/subscribe\\_to\\_rhinews/free\\_online\\_newsletter.phtml](http://www.savetherhino.org/subscribe_to_rhinews/free_online_newsletter.phtml)<

## **PayPal Available on AAZK Website**

PayPayl, a secure credit card payment system, is now available on the AAZK website to pay for Professional Memberships (new or renewals). The Board of Directors is working with the webmaster to expand the use of the Pay Pal system on the Association's website to include payment for other membership categories as well as the purchase of AAZK publications and other AAZK merchandise.

## **Amazon.com Users--Don't Forget the AAZK Connection**

Just a reminder that if you regularly (or even occasionally) purchase items on *amazon.com*, there is a way you can also help out the Association while you are doing your shopping. If you go to *amazon.com* from the AAZK Home Page ([www.aazk.org](http://www.aazk.org)), the Association will receive 5% of the cost of your purchase. The *amazon.com* icon is at the bottom right of the AAZK Home Page. And the percentage from purchase of goods is on all items you purchase there - books, music, etc. So next time you want to do a little online shopping at *amazon.com*, get there through the AAZK website and help out your professional organization.

## **Have You Purchased Your Enrichment CD Yet?**

Following the recent release of the Third Edition of the AAZK Enrichment Notebook (CD), review copies were sent to several people so they could give the CD a try and see what they thought. Peter Dickinson, editor of *ZooNews Digest* out of the United Kingdom, had the following to say about this new resource - "I have spent an enjoyable past two days exploring this CD. Over the past few years I have extensively read enrichment papers and books both in paper and web format and this one takes the biscuit. It is the best I have come across so far. Certainly a very worthwhile addition to every zoo library. If you have no enrichment literature then this should be your first purchase. If you have a big enrichment library then this needs to be your next purchase! Buy it!"

We are pleased that Peter found this CD so worthwhile and for allowing us to share his comments with you. Order forms for the Enrichment Notebook CD, as well as the Fourth Edition of the Biological Values Information on Selected Mammals CD, are available at the AAZK website

([www.aazk.org](http://www.aazk.org)) and order forms appear in this issue of *AKF*. Both CDs may also be ordered by phone from Administrative Office using a MasterCard or Visa. Cost for each is \$25.00 for AAZK members and \$40.0 for nonmembers. Prices include domestic and Canadian shipping. To order by phone call 1-800-242-4519 (US) or 1-800-468-1966.

### **Coffee for the World Fundraising Proposal**

All AAZK Chapters were recently sent a flyer on a proposal from Coffee for the World offering them the opportunity to utilize their products in fundraising to benefit AAZK's rhino conservation efforts. They focused their proposal specifically on the Sumatran Rhino and our efforts in the Bukit Barisan Selatan National Park in Sumatra, Indonesia. The coffee is packaged in stunningly attractive wildlife-themed bags. One of their bags is a Sumatran rhino-themed bag, Badak Kawa, and each bag tells the story of the Sumatran rhino and the efforts underway to save this species from extinction. A portion of the sale of every bag is donated to the International Rhino Foundation. Chapters have the option of purchasing bags of coffee outright or taking orders and then having them filled by the company for later delivery. Chapters may purchase bags for \$8.00 with a suggested resale of \$10, thereby providing \$2.00 per bag for AAZK's conservation efforts in Sumatra. If you would like more information or have questions, you are encouraged to contact Bret Raymond, Coffee for the World, 206 W. Shaw St., Tyler, TX 75701; [info@CoffeeForTheWorld.com](mailto:info@CoffeeForTheWorld.com); (903) 360-0184. Visit their website at <http://www.CoffeeForTheWorld.com>

### **Great Website for Info on Zoo Keeper Training Schools**

We would like to make you all aware of a great website that offers information on programs designed to train individuals to pursue zoo keeping as a profession. AAZK member Alex Mohr, Keeper III, Folsom Children's Zoo, Lincoln, NE, has put together an amazing amount of contact information on Zoo Keeper Education programs including High School Programs, Two-Year Programs, Four-Year Programs, Management Programs, Conservations Programs, Aquarium or Marine Mammal Focus Programs, and International Training Programs. We encourage you to check it out at <http://www.wonderferret.com/zoood/> This may be a good resource for you when you get questions from interested individuals about where they can train to become a zoo keeper. According to Alex, this site is a "living document" which will be updated regularly. If you have information on a program not listed, you might want to forward it on to Alex for consideration for listing on the site. You may email Alex at [zookeeperfcz@cox.net](mailto:zookeeperfcz@cox.net) We applaud Alex's work on providing this important information.

### **Zoo Biology Group - A Great Resource for Information from Other Zoo Professionals**

Need assistance? You could try Zoo Biology, it is probably your best bet for zoo/animal information. Zoo Biology is the original discussion, question and answer group dealing with the diverse range of Zoo Sciences. First established in 1999 the Zoo Biology Group is concerned with all the disciplines involved in the running of a zoological garden - captive breeding, husbandry, cage design and construction, diets, enrichment, management, record keeping, etc. Hediger described zoo biology as "the science which embraced everything which was biologically relevant to the management of the zoological garden." This group is restricted to zoo professionals. It is specifically a forum for professional zoo staff. Exceptions may be considered in the case of students or allied professions. A genuine commitment to both *in-situ* and *ex-situ* conservation is absolutely essential. You are encouraged to copy answers to the group. The useful archive section increases each day. There are 1400+ Zoo Biology subscribers to date and 99% of subscribers have between five and 40 years of practical zoo experience in all areas. An immense combined expertise is waiting to share their knowledge. This group is moderated.

To Subscribe to Zoo Biology send an e-mail to: [zoo-biology-subscribe@yahoogroups.com](mailto:zoo-biology-subscribe@yahoogroups.com) Leave the subject and message area blank

When you subscribe at the same time please send a separate e-mail to: [peter@elvinhow.prestel.co.uk](mailto:peter@elvinhow.prestel.co.uk) giving your brief bio. (e.g. collection, work area and interests). All details will be kept strictly confidential. Failure to do this will mean that your subscription will not be processed. This step is essential to keep the group restricted to professional zoo staff.

To Unsubscribe from Zoo Biology send an e-mail to: [zoo-biology-unsubscribe@yahoogroups.com](mailto:zoo-biology-unsubscribe@yahoogroups.com) Leave the subject and message area blank.

# Coming Events

**28th Annual Meeting of the International Herpetological Symposium** - 10-13 August, 2004 at the Adam's Mark Hotel in Daytona Beach Resort, Daytona Beach, FL. For info: visit [www.kingsnake.com/ihs](http://www.kingsnake.com/ihs)<

**Association of Avian Veterinarians 25th Annual Expo and Conference** - 19-20 August 2004 in New Orleans, LA. Theme is "Birds and All That Jazz". For more info or to view the entire program visit [www.conferenceoffice.com/aav](http://www.conferenceoffice.com/aav) or email [aav@conferenceoffice.com](mailto:aav@conferenceoffice.com), or phone (303) 756-8380<

**24th Annual Association of Zoo Veterinary Technicians Conference** - 25-28 August, 2004 at Roosevelt Park Zoo in Minot, ND. Info at [www.azvt.org](http://www.azvt.org)<

**Joint Conference of the American Assoc. of Zoo Vets, the Wildlife Disease Assoc. and American Assoc. of Wildlife Vets** - 27 August-3 Sept. 2004 in San Diego, CA. For additional info, contact Wilbur Armand, VMD, Executive Director/AAZV at (610) 892-4812 or email [AAZV@aol.com](mailto:AAZV@aol.com)<

**International Zoo Educators (IZE) Conference 2004** 4-9 September 2004 at Ocean Park, Hong Kong. For more information visit - <http://www.izea.net><

**2004 AZAD Conference** - 8-12 September 2004. Hosted by the Philadelphia Zoo. The theme is "Conservation with a Ring". For more info contact Bert DeVries or Mary Murphy at [AZAD2004@AZADocents.org](mailto:AZAD2004@AZADocents.org)<

**Red Panda SSP Keeper Training Workshop 2004** 10-12 September 2004 at Knoxville Zoological Gardens, Knoxville, TN. For more information contact: Jennifer Manrod, Conservation Biologist, Knoxville Zoological Gardens, Conservation and Science Dept., P.O. Box 6040, Knoxville, TN 37914; or E-mail: [jmanrod@knoxville-zoo.org](mailto:jmanrod@knoxville-zoo.org)<; Phone: (865)637-5331 ext.389; Fax: (865)637-1943.

**Animal Training Workshop** - with Ken Ramirez, author of *Animal Training: Successful Animal Management Through Positive Reinforcement*. - 19-22 September 2004 at the Hyatt Regency Oakbrook, Illinois (just outside of Chicago). The workshop is open to animal care professionals who work in a zoo or aquarium as well as private animal owners. Topics will range from basic operant conditioning to advanced concepts such as problem solving and dealing with aggression. Complete information and registration form available online at [www.mytrainingstore.com](http://www.mytrainingstore.com)<

**AZA Annual Conference** - 19-23 September, 2004 in New Orleans, LA. Hosted by Audubon Nature Institute. Info at [www.aza.org/ConfWork/#top](http://www.aza.org/ConfWork/#top) or email Beth Strelitz, AZA Meetings Manager at [bstrelitz@aza.org](mailto:bstrelitz@aza.org)<

**The Aquarium and Zoo Facilities Association (AZFA)** - 26-29 September, 2004 in Oklahoma City,

OK. Program/registration info: [users.rowan.edu/~suyd8758/](mailto:users.rowan.edu/~suyd8758/) or contact Ernie Wilson at [ewilson@okzoo.org](mailto:ewilson@okzoo.org), phone ((405) 425-0201 or fax (405) 45-0207.

**Zoological Registrars Association Annual Meeting** - 29 Sept. - 2 Oct. 2004 in Toronto, Ont., Canada. Info at ZRA website [www.zra.homestead.com](http://www.zra.homestead.com)< as plans develop.

**2004 Fish Disease & Diagnostic Workshop** 1-2 October 2004. Sponsored by Ohio State University Veterinary Extension & the Laboratory for Wildlife & Environmental Health. Guest lectures from the zoo community include: Chris Bonar, VMD (Associate Veterinarian, Cleveland Metroparks Zoo) and Tim Mullican, DVM (Director of Newport Aquarium). To download registration materials, visit [http://www.jordanschaul.com/registration\\_information.htm](http://www.jordanschaul.com/registration_information.htm)<

**25th Annual Elephant Managers Association Conference** - 14-17 October, 2004 in Tulsa, OK. Hosted by Tulsa Zoo and Living Museum. Pre- and post-trips scheduled to Dickerson Park Zoo and Riddle's Elephant and Wildlife Sanctuary (18 Oct.). For more info email: [karendunn@ci.tulsa.ok.us](mailto:karendunn@ci.tulsa.ok.us)< or visit [www.elephantmanagers.com](http://www.elephantmanagers.com) and/or [www.tulsazoo.org](http://www.tulsazoo.org)<

**International Marine Animal Trainers Association (IMATA)** - October 17-22, 2004 in Kolmarden, Sweden. For more information: <http://www.imata.org> or email Kirstin Anderson at: [imata2004@stofanet.dk](mailto:imata2004@stofanet.dk)

**International Symposium on Construction and Maintenance in Zoos** - 21-24 November 2004 at Zoo Zürich, Zürich, Switzerland. Programme, Additional Information, Hotel Recommendations, Registration Forms are available at <http://www.zoo.ch/symposium>

**International Elephant Research Symposium** - 3-5 December, 2004 in Fort Worth, TX. Presented by the International Elephant Foundation and the Fort Worth Zoo This important symposium will concentrate on the research and conservation needs of captive and wild populations of elephants. Interested persons can also contact Tarren Wagener at [elephantsymposium@fortworthzoo.org](mailto:elephantsymposium@fortworthzoo.org) for additional information.

**6th International Aquarium Congress** - 5-10 December 2004 in Monterey, CA. Hosted by the Monterey Bay Aquarium. Additional information in English, French and Japanese is available online at <http://www.iac2004.org><

**The 7th International Conference on Environmental Enrichment** - to be held in August 2005 in New York City, NY, USA. The conference is hosted by the Wildlife Conservation Society (WCS). Watch this page for details as they become available.

Post Your Coming Event Here - email to: [akfeditor@zk.scsoxmail.com](mailto:akfeditor@zk.scsoxmail.com)

# Dallas 2004 National Conference Update

September 26-30th 2004 in Dallas, Texas

Registration deadline 23 August; \$25 late fee after that time.

Hotel deadline is 1 September.

Check out the July AKF for hotel and conference registration information and our website at <http://www.dallaszoo.com/oth/oth.asp?page=aazk> for program details and late-breaking news.

Thanks to a tremendous number of paper, workshop and poster proposals, we anticipate a varied and exciting professional program.

## Keynote speakers include:

- Steve Martin, founder of Natural Encounters Inc.
- Naida Loskutoff, reproductive physiologist with the Center for Conservation and Research at Omaha's Henry Doorly Zoo
- Dave M. Schleser, co-founder of Nature's Images, Inc.
- Rich Block, Director and CEO of Santa Barbara Zoo

## Professional Development Seminars

Two seminars will be offered at the conference:

### 1) The Basics of Artificial Reproduction Techniques

### 2) Starting a Research Project: How to Develop a Question and Determine Methods.

Attendance is limited for these free seminars, so check out course information and registration details on the website.

## Trips

There are still a few spots in our pre and post-conference trips. Pre-conference overnight trip to Cameron Park Zoo and Fossil Rim Wildlife Center on 25 & 26 September is \$60 per person. Post-conference day trip to Caldwell Zoo on Friday, October 1 is \$25 per person.

# See you in Dallas!

# AAZK Announces New Members

## New Professional Members

Kimberly Moses, **Zoo New England (MA)**;  
Chris Godino, no zoo listed (**Newton, MA**);  
Melissa Duschak, **Trexler Game Farm (PA)**;  
Kelly Craddock, **Riverbanks Zoo & Garden (SC)**; Carol Henger, **Palm Beach Zoo at Dreher Park (FL)**; Kathy Stearns, no zoo listed (**Dade City, FL**); Ryan Harris, **Hardee County Animal Refuge (FL)**; Sally Samantha Marie Smith, **Birmingham Zoo (AL)**; Bryan Kwiatkowski, **Milwaukee County Zoo (WI)**; Amanda Turnbull, **Niabi Zoo (IL)**; Heather Adkesson, **Scovil Zoo (IL)**; Angela Gibson, no zoo listed (**Springfield, MO**); Bill Smith, **Audubon Zoo (LA)**; Vicki Vroble, **Houston Zoo (TX)**; and Danila Cremonia, **San Diego Zoo (CA)**.

## Renewing Contributing Members

Joan Diebold, Keeper  
Franklin Park Zoo, Boston, MA  
Vernon N. Kisling, Jr.  
High Springs, FL

## Renewing Institutional Members

Busch Gardens Tampa Bay  
Tampa, FL  
Glenn Young, VP of Zoological Operations

# Rhino Keeper Workshop 2005

*Hosted by Columbus Zoo & Aquarium*

## Call for Papers, Posters & Video Presentations

Deadline for abstracts: **1 January 2005**

Deadline for papers: **1 March 2005**

Abstracts must include:

- name, address, institution, title of presenter
- title, topic, objective, methods, results, and conclusion
- Medium (paper, poster, video)
- A/V requirements
- Limit 300 words

**\*\*Submit electronically in Word Format\*\***

Submit abstracts to:

Adam Felts  
Pachyderm Department  
Columbus Zoo & Aquarium  
9990 Riverside Dr.  
Powell, Ohio 43605-0400  
Adam.felts@columbuszoo.org  
Phone: (614)724-3413



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**FAX: (352) 495-9781**  
**e-mail: GrmtRodent@aol.com**

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# Bowling For Rhino Reminders



As we quickly approach the deadline of September 1<sup>st</sup> for BFR trip winners to have money sent in to me, I wanted to do a reminder list.

The trips are intended to be awarded to top money raising **individuals**. Please turn in your top money raiser sponsor forms so I can verify the winners. If you have more than one person who raises over \$1,000, please send in those forms also.

**Mail checks made payable to AAZK, Inc. to: Patty Pearthree, c/o BFR, 318 Montibello Dr., Cary, NC 27513.**

There will be **4 trip winners this year**. The International Rhino Foundation has agreed to pay for two winners to visit the Indonesian Parks. Each must have raised at least \$1,000.

It is called Bowling For Rhinos, but we save habitat so we save everything from orchids to elephants in some of the most unique ecosystems in the world!

**100%** of all funds go directly to conservation in the wild so **every penny counts!**

**BFR money has played a significant role in the survival of rhinos worldwide. Let's keep up the great work!**

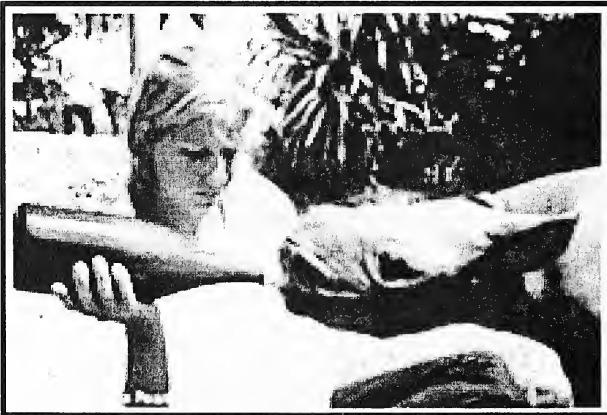
## Bowling For Rhino Update

Another 7,000 acres was acquired by Lewa in March of 2004. This increases the size of land protected for rhino from 5,000 acres in 1983 to 62,000 acres in 2004 (plus another 15,000 acres of the Ngare Ndare Forest area that is government-owned but used and protected by Lewa).

Lewa is currently raising a female black rhino calf that was orphaned by her nearly blind mother. This is the second calf born to this female. Her first calf, a male named Omni, is doing quite well in a protected area near Il Ngwesi.

Poaching is still a serious threat in East Africa. One of Lewa's neighboring rhino sanctuaries, Solio Ranch, had seven rhinos lost to poachers in June, 2004 while I was visiting Lewa with my family. Lewa, with the help of the Kenya Wildlife Service, is providing emergency security at Solio as well

as assistance to rhinos that were saved from snares.



Lewa has an excellent reputation and has never lost a rhino or elephant due to poaching. Outside of Lewa, these animals are still being poached at alarming rates. Lewa can never let its guard down. With the help of AAZK's Bowling For Rhinos, Lewa is a role model for parks in East Africa. One can be proud of the accomplishments, but there is still much work to be done. We will meet the challenge!

*Rhino orphan being bottle-fed at Lewa*

Just Released.....

# ***Biological Information on Selected Mammals 4th Edition***

***CDROM Version***

***A product of the American Association of Zoo Keepers, Inc.***

The 1,396 page *Biological Information on Selected Mammal Species* CD covers a wide range from general, breeding, and young-rearing behavior to diet and physical descriptions of 590 species. The volume is in a PDF format allowing searches by Species (Common or Latin name); or Key words using the *Find* function; or by Species (Common or Latin name), Family; or Order using the *Bookmarks*. Table of Contents are given for Orders, Families, Species by Common Name, Species by Scientific Name, and Species by Order and Family. The Appendices cover a variety of information from behavioral patterns common to families (Bovoid displays) to taxonomy (Primates). References are listed by Order and Family.

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## **Biological Information for Selected Mammals CD Order Form**

*(Please type or print clearly)*

I wish to order \_\_\_\_\_ copy (ies) of the **Biological Information for Selected Mammals CD**

**AAZK Member \$25.00      Non-Member \$40.00**

Price includes Domestic and Canadian First Class Postage.  
Overseas orders should add \$5.00 per CD for Air Mail Postage.

#copies x price \$ \_\_\_\_\_  
postage (if applicable) \$ \_\_\_\_\_

**Total for Order**      \$ \_\_\_\_\_

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City \_\_\_\_\_ State/Province \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_

Payment Options: check enclosed \_\_\_\_\_ Mastercard \_\_\_\_\_ VISA \_\_\_\_\_  
(checks payable to AAZK, Inc. U.S. Funds ONLY)

Credit Card # \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Exp. Date \_\_\_\_\_ Name on Credit Card \_\_\_\_\_  
(please print clearly)

Signature \_\_\_\_\_

Phone # \_\_\_\_\_

Email \_\_\_\_\_

Mail completed Order Form and payment or authorization to: AAZK, Inc., 3601 SW 29th St., Suite 133, Topeka, Kansas 66614-2054 USA ATTN: BISM Order. **Phone orders** using a Mastercard or VISA credit card may be placed by calling 1-800-242-4519 (U.S. ) or 1-800-468-1966 (Canada)

Just Released.....

# AAZK Enrichment Notebook, Third Edition CDROM Version

*A product of the American Association of Zoo Keepers, Inc.*

This 455-page publication includes many facets of animal enrichment and is indexed for easy reference. The sections include an Overview of Enrichment, Enrichment Links, Enrichment Suppliers, Suggested Guidelines (Bats, Bears, Birds, Carnivores, Fishes, Primates, Reptiles, and Ungulates), Safety Considerations, Lists of Browse Plants and Toxic Plants, Cookbook Recipes for Enrichment, Enrichment Ideas/Devices (organized by category), Sample Enrichment Forms currently used in zoological facilities, and an extensive Enrichment Bibliography. This is a searchable PDF format document utilizing Acrobat Reader which is included

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## AAZK Enrichment Notebook Order Form

*(Please type or print clearly)*

I wish to order \_\_\_\_\_ copy (ies) of the AAZK Enrichment Notebook, 3<sup>rd</sup> Edition

*Price includes Domestic and Canadian First Class Postage. Overseas orders should add \$5.00 per CD for Air Mail Postage.*

AAZK Member \$25.00

Non-Member \$40.00

#copies x price \$ \_\_\_\_\_

postage (if applicable) \$ \_\_\_\_\_

Total for Order \$ \_\_\_\_\_

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Phone \_\_\_\_\_ Email \_\_\_\_\_

Payment Options: check enclosed \_\_\_\_\_ Mastercard \_\_\_\_\_ VISA \_\_\_\_\_

*(checks payable to AAZK, Inc. U.S. Funds ONLY)*

Credit Card # \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Exp. Date \_\_\_\_\_

Name on Credit Card \_\_\_\_\_

*(please print clearly)*

Signature \_\_\_\_\_

Mail completed Order Form and payment or authorization to: AAZK, Inc., 3601 SW 29th St., Suite 133, Topeka, Kansas 66614-2054 USA ATTN: EN3 Order. **North American phone orders** using a Mastercard or VISA credit card may be placed by calling 1-800-242-4519 (U.S. ) or 1-800-468-1966 (Canada)



## *Success of Leparua Adopt-A-School Fund*

The school lunch program that began with the first \$400 we sent in June of 2003 is a big hit at the school! With the recent \$250 donation from Roger Williams Park AAZK, we have now raised over \$ 5,000 for the Leparua School. Students are now being fed maize and beans on a daily basis.

If you recall, \$3,526 would feed the whole Leparua School for one year. I am currently working on expanding our efforts to include another school in the program because we have been so successful. I was recently able to visit the Leparua School at lunchtime and all the children were so grateful to the U.S. zoos/AAZK Chapters! Each class sang a thank you song. If you would like to find more information or see pictures, please visit the web site: [www.lewa.org](http://www.lewa.org). It is amazing what a difference this money can make in the lives of these students!

When I visited Lewa in December, 2002, I discovered that the school kids at Leparua (one of the five schools Lewa supports in Kenya) are expected to stay at school all day but the only nourishment they got was milk for lunch, and many walked an hour each way to school. We all know how important proper nutrition is for learning, so I thought the best thing additional funding could support would be a lunch program.

The only assistance that the Kenyan government, through the Ministry of Education, provides towards Kenya's primary schools is to supply the teachers and pay their wages. Everything else like textbooks, writing materials, desks, blackboards and the buildings themselves have to be supplied by the local

community. It is very difficult for parents to fulfill these requirements considering that an average rural Kenyan family consisting of roughly five children earns a wage of \$2/ day on average.



Lewa's aim is to give children on their boundaries access to the best possible education and to create an awareness of the importance of conservation. All of the classes are invited to tour Lewa where most see animals such as rhino and elephant for the first time in their lives.

**Ian and Danny Pearthree visit with some of the children who are enjoying their lunch at the Leparua School.**

Lewa built five schools in the surrounding area and a trust fund annually pays for

the top student from each school to continue on to secondary school. A school lunch program is one of the main objectives for all five schools in the coming years.

This is a special project for AAZK that is intended to be in addition to "Bowling For Rhinos" (BFR) and not meant to take away from the BFR effort. We want to make this project available for those wishing to **support conservation through education**. If you or your Chapter would like to support the "Adopt-A-School" program, please **make checks payable to: AAZK, Inc.** and mail to:

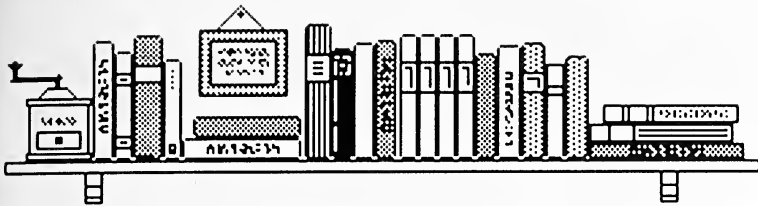
"Adopt-A-School Program", AAZK Administration Office  
3601 SW 29<sup>th</sup> St., Suite 133, Topeka, KS 66614-2054

# AAZK Book Sale

Sale price is 20% off the Suggested Price.  
Previous books *may* still be available, with some price increases.

| <u>Sug. \$</u> | <u>Sale \$</u> | <u>Item Title and Description</u>  |
|----------------|----------------|--|
| \$15.95        | \$12.76        | <u>Minding Animals: Awareness, Emotions &amp; Heart</u> – Marc Bekoff. Thinking bees, ice-skating buffaloes, dreaming rats, happy foxes, ecstatic elephants, despondent dolphins—in <i>Minding Animals</i> , Marc Bekoff takes us on an exhilarating tour of the emotional and mental world of animals, where we meet creatures who do amazing things and whose lives are filled with mysteries. 256 pages, hardcover, b & w photographs   |
| \$24.95        | \$19.96        | <u>Raptor Almanac</u> – Scott Weidensaul - This inspiring, all-inclusive book covers raptor evolution, taxonomy, behavior, courtship and breeding, nesting, migration, human/bird interaction, environmental threats, and conservation efforts—from the well-known programs to reintroduce the California condor and peregrine falcon, to lesser-known efforts to preserve the snail kite and the ferruginous hawk. 384 pages, paper   |
| \$55.00        | \$44.00        | <u>Nature's Flyers: Birds, Insects &amp; the Bomechanics of Flight</u> – David E. Alexander - This is a detailed account of our current scientific understanding of the primary aspects of flight in nature. Alexander explains the physical basis of flight with sharp prose and clear diagrams. Drawing upon bats, birds, insects, pterosaurs, and even winged seeds, he details the basic operating principles of wings and then moves progressively through more complex modes of animal flight, including gliding, flapping, and maneuvering. 384 pages, paper, b & w illustrations |
| \$19.95        | \$15.96        | <u>Forest Cats of North America: Cougars, Bobcats &amp; Lynx</u> – Jerry Kobalenko – “Wildcats may be nature’s greatest design, the perfect balance of form and function,” writes Kobalenko. The tremendous evolutionary state of these wild cats is presented along with the necessity of their preservation. 128 pages, paper, full color photographs  |
| \$12.95        | \$10.36        | <u>Animals as Teachers and Healers: True Stories &amp; Reflections</u> – Susan Chernak McElroy – Animals are guardians, companions, and soul menders. This book reminds us of the lessons and healing that flow from the relationship between animals and humans. 256 pages, paper, b & w photographs  |
| \$35.00        | \$28.00        | <u>Lizards: Natural History; A Natural History of Some Uncommon Creatures Extraordinary Chameleons, Iguanas, Geckos, &amp; more</u> David Badger – Or that the dwarf gecko is the world’s smallest reptile, measuring just six-tenths of an inch? Or that the six-lined racerunner has been timed for short distances at 18 miles per hour? 160 pages, hardcover, full color photos  |

**To Order:** List the items you are ordering along with your name and complete mailing address. Include a shipping fee of \$3 for the first item and \$2 for each additional item. Check payable to: “AAZK Book Sales” (US FUNDS ONLY - NO CASH OR COD’s please). Sorry we cannot process credit card orders. **Call or fax for shipping fees when ordering from outside the continental United States before sending any money.** We will work to find the best form of shipment. **Mail requests to:** AAZK Beardsley Zoo Chapter, attn.: Linda Tomas, 1875 Noble Ave., Bridgeport, CT 06610 **Phone:** 203-332-4249 **Fax:** 203-394-6566 **E-mail:** ltomas@beardsleyzoo.org



## Book Reviews

### **Medicine and Surgery of Tortoises and Turtles**

Stuart McArthur, Roger Wilkinson, and Jean Meyer - 2004

Blackwell Publishing, P.O. Box 570, Ams, IA 50010-0570

ISBN# 1405108894

579 pages, illustrations/photos Price: \$217 hardcover

*Review by Sandra C. Wilson, DVM, MS  
Veterinarian  
Sedgwick County Zoo, Wichita, KS*

This comprehensive text, authored by our European colleagues, is a welcome addition to the expanding base of literature devoted to reptile medicine. In the not too distant past, the veterinarian had to rely on the occasional published case report for medical information on chelonians. Now comes a 579-page volume covering everything from basic biology to magnetic resonance imaging. The list of contributing authors includes Stephen J. Hernandez-Divers and Charles Innes, well-known for their expertise in reptile medicine in this country.

The first 100 pages are devoted to identification, anatomy and physiology, and nutrition and husbandry of chelonians. The emphasis is on Mediterranean and African species, but some information is presented on new world species as well. A brief chapter titled Infectious Agents seems a bit out of place in this section, but the apparent intent is to provide some information on zoonoses early in the text. The topic of infectious agents, zoonotic and otherwise, is covered in more detail later in the text.

Several chapters cover diagnosis, including clinical pathology and imaging techniques. The section on endoscopy is very thorough, and nicely illustrated with photographs, as is the section on MRI. An increasing number of universities now offer MRI and CT for reptiles. The chapters on hospitalization, feeding techniques and fluids are extensive, and provide detailed information on the appropriate environment and critical care for all types of chelonians. Hospitalization, with the proper accommodations, can greatly improve the outcome of treatment, especially for the critically ill patient.

Many clinicians will find the chapters using the problem-solving approach to common diseases very useful. The chapters are divided into marine turtles, and terrestrial and semi-aquatic species. Each condition/disease listed is followed by etiology, clinical signs, history, diagnosis and treatment. The sections are concise, and will serve as a quick reference when evaluating the chelonian patient.

The remainder of the text is devoted to anesthesia, surgery, therapeutics, a formulary, and the appendices. A great deal of information is provided on patient preparation and monitoring, and the use of injectable anesthetics. One table, complete with references, lists 17 different dosages for ketamine and ketamine combinations used in chelonians. This chapter also includes helpful information on euthanasia. Basic surgery as well as advanced techniques such as radiosurgery and laser surgery are very well covered in this text. Specific procedures, including three different approaches to celiotomy, are covered in detail. The material presented on traumatic injuries is extensive and well illustrated. The formulary is particularly useful. Unlike some texts which simply list the drug and dosage, each listing is followed by indications, special precautions, interactions, and comments. Although much of this information is extrapolated from other species, comments are specific to chelonians when appropriate.

Appendix A focuses on turtle conservation, highlighting the threats to turtle populations around the world, and the efforts of the many dedicated individuals and organizations, working to reverse the current population trends. Other appendices include a few examples of species specific care sheets, a list of poisonous plants, and a section on rehabilitation of Asian chelonians.

This text is very well illustrated with numerous photographs, most of which are of high quality. Line drawings are used occasionally, and are very helpful for example, in the interpretation of sonograms in the chapter on diagnostic imaging techniques. Unlike many texts, the Table of Contents is very detailed, allowing the reader to quickly scan the material for needed information. Veterinarians in private practice and in zoos, as well as experienced keepers of chelonians, will find this a valuable addition to their library.

### **Macropods: Their Care, Breeding and the Rearing of Their Young**

By David McCauley

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Lithopress, Inc. San Antonio, TX

ISBN: 097458720-6

Email: [info@davesanimalfarm.com](mailto:info@davesanimalfarm.com) Website: [www.davesanimalfarm.com](http://www.davesanimalfarm.com)

331 pgs., Paperback/CD-ROM \$45.00

*Review by Jacque Blessington, Zoo Keeper  
Kansas City Zoo, Kansas City, MO*

David McCauley has owned and studied animals for most of his life. Information for this book was compiled with over 25 years of his personal experience from managing his own mob of macropods that sometimes exceeded over 100 individuals and six years of education studying Animal Science and Animal Medical Technology. Using his educational background in animal nutrition, David developed a special feed for his mob of Bennett's Wallabies and later sold the formulation to Purina Mills Inc. who named the product Mazuri, Kangaroo and Wallaby Diet 5Z88.

This book was written in laymen's terms with the intention of improving the quality of care through information and education for the inexperienced macropod owner and their veterinarian. It is also intended that this book be an easy, quick reference for anyone working with macropods.

The book covers information on common macropod species held in the United States along with helpful hints on exhibit design for these species. A section covers basic information on anatomy, breeding and nutrition followed by valuable data on normal and biological values as well as medical treatments commonly used. Eighteen commonly found diseases and conditions are covered with information on symptoms, treatments and prevention. A separate section covers joeys and their special needs and care provisions.

And a fabulous extra bonus: an interactive CD-ROM! This CD has three different files to explore. The first includes nine species files that include pictures of each species, general information, reproductive progression, nasal identification by species and marsupial species index. This section also includes 135 photos of wild and captive animals engaged in courtship, grooming, play and fun. The second file identifies poisonous plant species. There are 171 different plants with photos of each and locations found in the United States. The last file is a set of nine different videos that cover bottle feeding, tail restraint and play.

Though personal preference and experience may sometimes give a slightly skewed opinion on some techniques and recommendations, the author has definitely done his research and has a lot of valuable information to share. Whether or not you agree with macropods in the private industry, this book is a valuable reference for any macropod caregiver.



# REACTIONS

## *A Question and Answer Forum for the Zoo Professional on Crisis Management*

*By William K. Baker, Jr., Curator  
Little Rock Zoo, Little Rock, AR*

### **Question**

What do you recommend in the way of knives for zoo work?

### *Comments*

There are an astounding variety of knives out on the market today. They range across the spectrum from pocket style, multi-tools, all the way up to tactical knives, and of course custom blades. Each has its own particular strengths and weaknesses. Rather than taking this topic-by-topic, I'm going to restrict my comments to what lends itself to the zoo and wildlife aspects of our profession.

### **Multi-tools**

These nifty pocket toolboxes have become the mainstay of the zoological profession in the last decade. Ever since Tim Leatherman introduced the PST® back around 1983 the knife market has undergone a revolution. While numerous companies have imitated or made variations on their design, Leatherman Tool Group™ still dominates this aspect of the market. The PST® comes equipped with needle nose pliers, regular pliers, wire cutters, hard-wire cutters, clip-point knife, metal/wood file, ruler, can/bottle opener, small, medium, and large screwdrivers, Phillips screwdriver (#1/#2) and a Awl punch. The Super Leatherman® also has locking components and provides a more secure gripping area.

Presently, there are several other companies that do make a comparable product and certainly deserve mention. The Gerber Multi-Plier® 600 is probably the one that I see the most in use aside from the PST® in the zoo profession. It has 10 locking components. These include: pliers, large, medium, and small screwdrivers, cross point screwdriver, lanyard ring, drop point knife blade, serrated sheep foot knife blade, can opener, bottle opener, and a file. The SOG Paratool® is a strong contender as well with needle nose pliers that work straight or with jaws at a 40-degree angle; wire cutter, four screwdrivers including Phillips; file, awl, knife blade, and a serrated knife blade.

Regardless of the manufacture or model chosen, there are numerous accessories usually available for each system. This includes pouches, tool kits, subdued finish, and even models with blasting cap crimper's should you feel the need to play with explosives. Also of mention are Kershaw Knives™ newest additions to their line, the Carabiner Tool® and Mini-Carabiner Tool®. These neat little multi-purposes are composed of a 6061 T6 Aircraft Aluminum frame and an AUS6A stainless steel composition for the cleverly hidden knife blade and other components. Sleek in design, it can be hooked to belt loops, pockets, and equipment. While the ergonomics may be problematic for some individuals during daily usage, it would make an excellent back-up knife for fieldwork in country and abroad.

### *Single-handed Knives*

This for many was the next logical evolution for the traditional pocketknife. It's normally a folder and the blade is enclosed inside the handle. This style is typically attached or "clipped" to your pants or pocket by way of a metal spring clip attached to the back of the knife handle. The truly distinctive feature is that they are designed to be drawn and opened with one hand, (very quickly I might add). This is often accomplished with the inclusion of a thumbhole or metal pin on the back of the blade. Also, these blades by design are multi-use and come with either plain or serrated blades.

Probably the best example of this style is the knives manufactured by Spyderco™. They have seen use with law enforcement, EMT's, and military forces around the world for many years. Of the Spyderco™ line, the most popular in my experience is the Endura® series. The Endura Lightweight® is a solid performer in their line and comes equipped with 3 15/16" (100 mm) blade made of VG-10 steel, a reversible ambidextrous clip, and a handle made of fiberglass reinforced nylon. Overall length for this model is 8 13/16" (223 mm). Another company of mention is Emerson Knives™. They have been a high profile performer in the military community for many years and have a solid track record, especially with their CQC® knife series. Many military professionals in special warfare units have staked their lives on these knives with no regrets.

### *Custom and Semi-custom Knives*

When it comes to production knives there are a handful that approach custom quality during the design and manufacture process. Of those companies, the one I have seen treated with respect in this regard would be Al Mar™. Since 1979, they have been committed to making unique designs at quality levels that rival custom, hand-made knives. Each knife is hand finished and hand sharpened by a craftsman at their facility. Also, each knife features flat-ground blades for superior strength and superior performance. Having used their blades before, I can vouch for the quality.

There are so many custom bladesmiths these days, it can be really hard to decide on who you are comfortable with, especially when considering that custom blades can be quite pricey. But, I have always believed that you get what you pay for. For myself, I have been using Chris Reeve Knives™ since he was back in Africa, before he came to the U.S. many years ago. Simply put, his knives are virtually indestructible and they have helped me out of more than a few situations in my life. His shop produces both fixed blade models and folders; it just depends on your individual needs and available budget. This is not to say that these are the only dependable custom blades out there, far from it, this just happens to be what I use and depend on.

### *Further Information*

Almost every knife company and custom manufacturer maintains an excellent website that can provide further information and on-line catalogs of their product line. Also, they normally have a provision for locating a distributor of their products near you. Custom knife makers usually allow you to order directly from their line, which I highly recommend to save money. In addition, Blade magazine is an excellent resource for tracking current industry trends and custom blade designs. This magazine is available at most major bookstores.

### *Websites for products in this column:*

|                                    |  |
|------------------------------------|--|
| Al Mar Knives                      | <a href="http://www.almarkives.com">www.almarkives.com</a>       |
| Chris Reeve Knives, Inc.           | <a href="http://www.chrisreeve.com">www.chrisreeve.com</a>       |
| Emerson Knives, Inc.               | <a href="http://www.emersonknives.com">www.emersonknives.com</a> |
| Gerber Legendary Blades            | <a href="http://www.gerberblades.com">www.gerberblades.com</a>   |
| Kershaw Knives, Inc.               | <a href="http://www.kershawknives.com">www.kershawknives.com</a> |
| Leatherman Tool Group, Inc.        | <a href="http://www.leatherman.com">www.leatherman.com</a>       |
| SOG Specialty Knives & Tools, Inc. | <a href="http://www.sogknives.com">www.sogknives.com</a>         |
| Spyderco, Inc.                     | <a href="http://www.spyderco.com">www.spyderco.com</a>           |

## Question

In reading your columns for the past few years, you seem to have led a rather eclectic life and I've heard that you even have a mantra. Is that true?

## Comments

All right, I'll answer this just once. For anyone who has ever seen the movie "Bull Durham" the following will make perfect sense.

I believe in Karma, Christianity, and militarism tempered with Zen Philosophy, that trust, respect, and credibility is earned and never bought or demanded. I think that life should come with a soundtrack and every person has a song to sing, but a touch of darkness on the soul bespeaks life experience and the ability to walk through shadow.

I believe in brunettes, with great eyes, and committed relationships, that you should always have your hat, boots, and knife when you're out on the road, that every individual should be treated with respect unless their nature dictates otherwise, and that striving for personal growth and finding a soul mate are pretty good goals to have in life.

I believe that conservation isn't just our profession, but a way of life that defines us, and that we do make a difference, that free-contact animal management makes perfect sense, that cats rule, and our professional life is a journey and not a guided tour, and that you truly are defined by the company you keep and who you call friends.

**Next Month:** What resources and research is currently available regarding carnivore enclosures and exhibit fabrication?

**If you would like to submit a question for this column or have comments on previously published materials, please send them to AAZK, Inc., 3601 S.W. 29th St., Suite 133, Topeka, KS 66614-2054, Attn: Reactions/AKF**

(About the Author: Since 1985 Bill has been active in the fields of science, zoology, and wildlife management. His education and experience include a B.S. in wildlife management and post-graduate studies in zoology, Lab and Museum Assistant, Shoot Team Leader, ERT Member, Large Mammal Keeper, Senior Keeper, and Zoo Curator at various zoological facilities. His area of research is crisis management in zoological institutions, which draws upon practical experience and training as a Rescue Diver, Hunter Safety Instructor, NRA Firearms Instructor, and Red Cross CPR/First Aid Instructor.)

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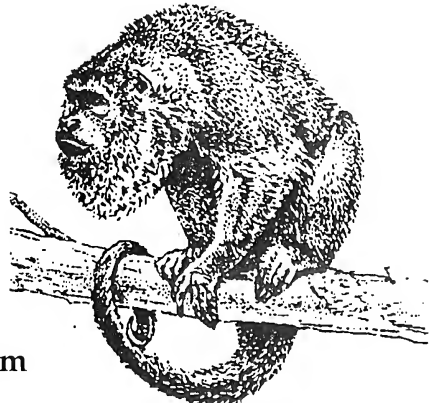
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# Now Available - New AAZK Logo Pins & Patches



*shown actual size*



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The new AAZK logo design (by Amy Burgess of Disney's Animal Kingdom) is now featured on both a patch and enameled pin. The colors are tan, rust, burgundy, grey, blue with a black border. Patches (4" x 3") cost \$8.00 each. The pins (3/4") cost \$6.00 each. Prices include domestic and Canadian shipping. This price covers postage for one pin or one patch to overseas addresses. For overseas orders of from 2-6 patches or pins, you **must** add \$2.00 additional for shipping.

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# BUBBLE GUM AND SHOELACES

## Working with Animals in an Older Facility

By

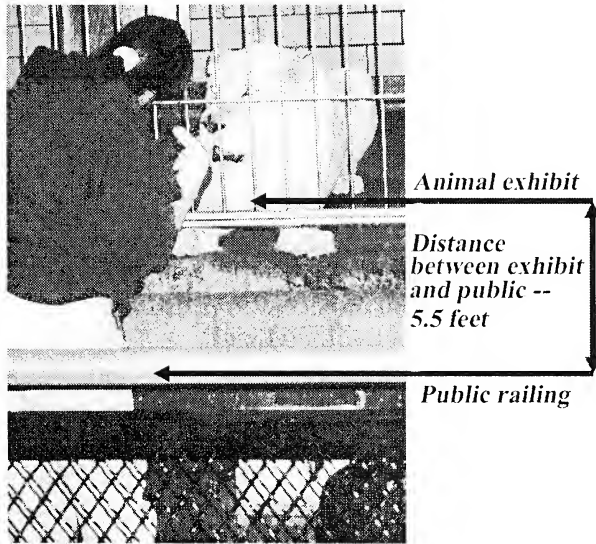
Kay Buffamonte, Lion House Keeper

Tara Brody, Lion House Keeper

Philadelphia Zoo, Philadelphia, PA

The current Carnivore House at the Philadelphia Zoo is more than 50 years old. When it was constructed in 1949, it was considered a modern facility. Elevated bedroom floors, light colored tile that replaced dark concrete floors and walls, and public barriers set less than 1.7 meters (5.5 feet) from the cage fronts offered what was then an innovative and eye-level view of big cats. However, today the facility provides a few challenges for progressive care of the collection.

As keepers, early goals included regular voluntary weights, examining and trimming the nails and foot pad of an Amur leopard (*Pardus orientalis*) with a chronic condition, and ultimately, looking at possibilities for voluntary vaccinations with some of the cats. At least three significant challenges to working in an older building soon became apparent.



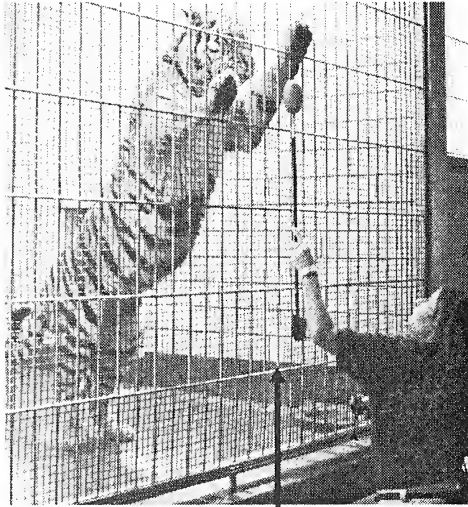
There is no off-exhibit space in the Lion House. All the work the keepers do with the animals, including feeding, cleaning, enrichment, introductions and observations, takes place in full view of the crowds of visitors. The numbers of people and the sheer volume of the noise, coupled with their close physical proximity to both the animals and the keepers became the first challenge to training. It is also of no help that the animals housed here are high profile and can be vocal themselves, drawing large crowds. While most of the collection and the primary keepers are well desensitized to the number of people in their space, when training sessions are held, the public becomes an added complication. Laughing adults, crying babies, loud questions and comments and just general buzz can make a calm, focused and quiet session difficult, if not impossible.

### KEEPER AT WORK

Please hold your questions so our keeper can concentrate on working with this animal.

Because the animals were unaccustomed to working with keepers in this way (and the keepers were learning, too!), there was an initial period of increased aggression. The animals' aggression seemed to come from two places: the keepers' tension and distraction as the visitors asked questions or attempted to engage the animal being worked with, and the cats' inability to hear the keeper's cues over the volume of noise. To help alleviate this problem, portable graphics asking the public to

hold comments and questions were used, as well as an occasional partner for crowd control. The cats also learned some hand cues.



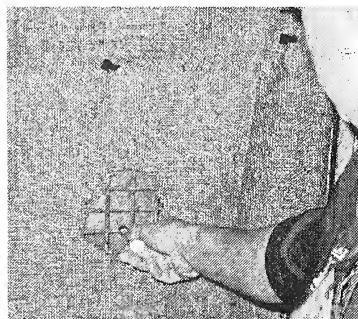
*Targeting Up*

*Reinforcement Portal*

Secondly, was the issue of the cage fronts. The bars on the front of the cages are 9.5 centimeters (3.78 in.) apart. While this is of help in some aspects, it was a challenge in others. All of the cats are able to reach out of the cages the length of their leg to their chests. Some of the cats, knowing food was available, could be quick to slap at the bars with their feet. While most usually do not reach out, slapping the bars caused the keepers to react, moving away from the cat and reinforcing the aggressive action. The solution was an easy one. Plastic coated wire was attached as needed to the cage fronts with portals for reinforcement cut along the mesh at intervals.

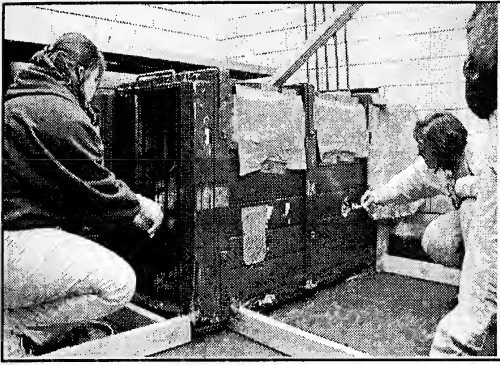


*Lion in den with primary keeper*



*Secondary keeper vaccinating in the tunnel*

Finally, there is the lack of squeeze cages, crates or built-in scales. Looking at the building set up and the materials already available, the keepers brainstormed to reach workable solutions. The ultimate goal was to successfully hand-vaccinate as many of the big cats as possible. The first idea was to use a preexisting 138 centimeter (~54 in.) tunnel that connected an indoor bedroom to an outdoor holding cage. As the cat passes through the tunnel, its side is parallel to a mesh panel in a den space. Only this den space is off-exhibit, the indoor, outdoor and a view of the tunnel are all on exhibit to the public. The largest female lion was chosen to be the first to try this method. She was asked to pass through the tunnel, return to face the primary keeper across a mesh door and lay down to present her side to the secondary keeper in the den for injection training. While this method was successful once, the communication problems around the public prohibited this method from working for the other cats. The level of noise the public generated did not allow for effective and necessary communication between the two keepers.



Stepping back and evaluating other materials available, an unused wooden shipping crate seemed to have potential. It is 142 centimeters long, and 51.5 centimeters wide (~56 in. x 20 in.) with barred doors at either end. The crate was installed in an indoor bedroom against a shift door. A portal was carved into the crate to match a hip and one to fit a shoulder area to accommodate cats both leopard and lion sized. The cats were asked to enter the crate, lie down and hold for the primary trainer while the

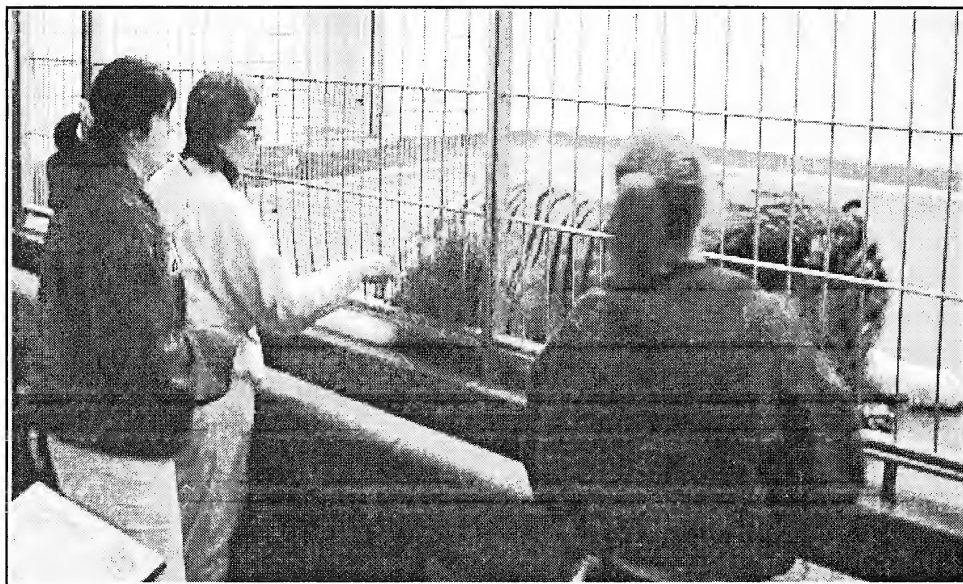
secondary trainer worked at the vaccination portals. This method provided for both trainers to be in the same bedroom with the crate and both to be in close proximity to the cat, allowing all three to effectively hear each other. For vaccination training, the back door to the crate was never closed, allowing the cats to leave the crate if they chose. Using this same crate, but closing the back door and having the secondary keeper positioned there, a tiger was trained for a voluntary blood draw in lieu of anesthesia for a preshipment physical. The crate acted as an effective chute to achieve these medical procedures without the use of blow darts.

However, when it came time to vaccinate a litter of mother-reared (unhandable) Amur tiger cubs (*Tigris altaica*) this crate was too big. By five months old, all three cubs knew the cues for “sit”, “down” and “target”. The idea was to orient them parallel to the cage front and have them hold a down position long enough to accept multiple vaccinations by hand. These babies had shorter attention spans and were much quicker to move. Again, a look around the building offered an option. There was a small squeeze cage that was used for smaller species. It measures 39 centimeters wide and 54 centimeters high (~15 in. x 21 in.), the cubs weighed about 37 kilograms (82 lb.) each. By removing the doors to the squeeze at either end, and securing it to the cage, it could be used as a sleeve to train the cubs to lay parallel to the cage front and hold there. Voluntary injections were successful when both trainers worked closely together and separated each cub out for short sessions.

In closing, we wanted to offer hope and some possible strategies for achieving voluntary medical behaviors in an older facility. Many keepers do not have squeeze cages, built-in scales, tunnels or cage fronts that will allow for a faster and easier means to work closely with the animals in their care. It may take some creative thinking, a bit of a paradigm shift, to come up with possible



solutions. If you do not have some pieces readily available, they could even be built. If you can determine it to be safe, take a look around and see what is in the building that might already be available to you. It has worked for us. As this article is printed, we have successfully vaccinated, without squeezing, ten of the 12 big cats in our building with 12 rounds of vaccines (two cats were done two years in a row). One 17-year-old tiger began working with us at 16 years old and positioned in front of the double mesh for his vaccines this year. There was one voluntary blood collection so far, several voluntary weights and nail and pad trimming for the leopard with the chronic condition. If you work in an older facility, it is possible to make the facility work for you.



*17-year old tiger receiving free vaccinations*

### **Acknowledgements**

The authors would like to acknowledge the assistance and support of several people: Curators- Andy Baker, Kim Lengel and Chris Waldron; Veterinarians - Drs., Hinshaw and Ialeggio; Veterinary Technicians - Sue Isackson, Jim Ronemus and Juliana Towson; Carpenters - John Barry and Jim Neal; and Docent Melanie Martin.

*Photos provided by the authors.*

# *Training Terminology—Part 6*

## *Extinguishing Behavior*

*By Beth Stark, Chair  
Animal Behavior Management Committee*

In previous articles, we have discussed methods of training behaviors. However, occasionally we encounter behaviors with the animals in our care that are less than desirable. There are a number of methods for extinguishing behavior, some of which are more positive than others. In this issue, we will discuss a few of these methods.

***Extinction*** - Process in which reinforcement is no longer delivered following a specific, previously reinforced behavior. Eventually the behavior dies out due to lack of reinforcement.

Extinction occurs when a behavior is consistently ignored or receives no reinforcement. When the animal (or person) does not receive any reaction or attention (i.e., reinforcement) for the behavior, there is no point in continuing the behavior. For example, a lion that charges its keepers as they walk by its enclosure might get the reaction of keepers jumping a bit when surprised by the animal. However, if the keepers do not react at all, the lion will soon realize that charging them has no effect and should eventually stop charging. The key to extinction is that the behavior is not reinforced AT ALL. Otherwise, if the animal occasionally gets reinforced, even if only periodically, it will likely continue to offer the behavior. In that case, it is said to be on a long schedule of reinforcement (because the reinforcement occurs after a long duration of time, the animal learns to continue the behavior because eventually it will be reinforced).

***Extinction Burst*** - The increase in a response that is brought on by the withdrawal of reinforcement. Extinction burst occurs just prior to the decline of behavior (due to lack of reinforcement) prior to extinction.

With no reinforcement following a behavior, an animal is likely to perform the behavior over and over in an attempt to get a response. This is considered an extinction burst. However, over time, the animal begins to realize that reinforcement is not forthcoming and will eventually stop offering the behavior. During the extinction process, the lion that charges its keepers will likely charge them at every opportunity in an effort to get a reaction from them. Over time, with the keepers not reacting at all, the lion should realize that charging is futile and stop offering that behavior.

***Incompatible Behavior*** - A behavior that is impossible to perform at the same time as another specific behavior. For example, running and sitting are incompatible behaviors, as one subject cannot perform both simultaneously.

When trying to eliminate an undesirable behavior, training an incompatible behavior can be quite useful. This method is also called Differential Reinforcement of an Incompatible Behavior, or DRI. The concept behind this extinction method is that an animal cannot perform two competing behaviors at the same time. Therefore, by training the animal to perform a behavior that is incompatible with

the undesirable behavior and asking for that behavior when the animal would normally offer the undesirable behavior, the trainer can extinguish the undesirable behavior. For example, many dog owners complain that their dogs jump on visitors who come through the door. A dog can be trained (and reinforced) to sit and stay while someone enters the house. The dog cannot physically sit and jump at the same time. Therefore, by asking the dog to sit, an incompatible behavior with jumping, the trainer can extinguish the jumping behavior. It is important to recognize that there is a balance of reinforcement between these behaviors. As long as it is more reinforcing for the dog to sit and stay, it will not jump on the visitors. However, if the dog is never positively reinforced for sitting, it might not find that behavior worth its while and may continue to jump on people.

**Regression** - *The state of a previously conditioned behavior reverting back to a lower stage of development.*

Occasionally an animal will perform a behavior at a less than optimal level. It might start jumping lower on a high jump, might not open its mouth as wide as usual during a mouth open behavior, or might be latent in its response to training cues. Behaviors regress for various reasons. There may be inconsistencies in the criteria that different trainers will accept and reinforce; the animal might forget a behavior or become confused about what it is being asked to do; or it might become frustrated and refuse to perform a behavior or parts of a behavior. Regardless of the reason, it is important to recognize regression of a behavior as soon as it starts in order to avoid diminishing the quality of the behavior.

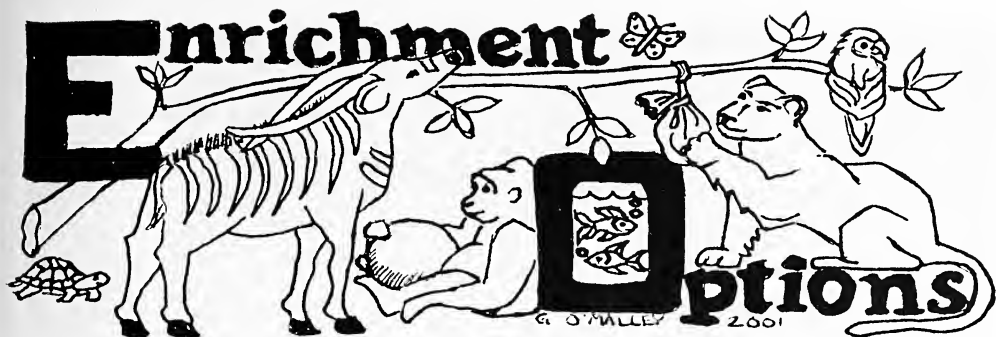
Often when training a behavior, trainers will use successive approximations and train in a step-by-step manor. When an animal has difficulty with a behavior, whether becoming confused or frustrated, the trainer can regress (go back) a step or two in the training process to remind the animal what it was doing. This process sets the animal up to succeed by asking it to do something it knows well. Once the animal performs at that step the trainer can quickly progress to the current step. Often this is enough to get the animal and the behavior back on track.

There are numerous methods of extinguishing behaviors, only a few of which are listed here. It is important to keep in mind that the method of choice should be one that sets both animal and trainer up to succeed in the most positive manner possible. In addition to extinguishing behaviors, some can regress in quality to the point that the behavior itself changes. This can often be avoided by keeping good training records and trainers observing each other during training sessions to ensure consistency. For more information, go to [www.aazk.org](http://www.aazk.org) and click on the Animal Behavior Management Committee.

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*EO Editors - Dawn Neptune, Utah's Hogle Zoo  
and Rachel Cantrell, Disney's Animal Kingdom*

## **Enrichment Items from Milwaukee County Zoo**

*Submitted by Dawn Fleuchaus, Hospital Area Supervisor  
Milwaukee County Zoo, Milwaukee, WI*

Providing zoo animals with enrichment items that are readily available, safe, interesting, naturalistic, durable, cost-effective, easy to prepare and clean, and functional can be challenging. This task can be compounded when dealing with animals that are large, intelligent and/or destructive. With all of these factors in mind, I have been working with a local plastics company, Kracor, Inc., developing enrichment items from products that the company already makes. Kracor had donated items to Milwaukee County Zoo (MCZ) in the past, and was now interested in producing a line of enrichment items intended for zoo use. Their products are intended for industrial uses, so they stood up well to some of the zoo's toughest customers. What a perfect starting point to create new enrichment devices! When looking for enrichment products for many species, the choices available were quite limited. Many of the products on the market, especially for larger animals, were unnatural looking, expensive, and often not up to the challenge. Our goal was to make items affordable, yet keeper-friendly, exhibit-friendly, and animal-friendly.

Looking through the Kracor warehouse, we chose a few shapes that resembled a piece of wood or rock or ice...made a few modifications, and sent them into the field! A trial survey accompanied each item. Keepers reported any safety concerns, animal reactions, suggested improvements, and ease in use for items tested with a new species. Most of the new toys and feeders came through with flying colors. Through our trials, we adjusted the size and number of holes in food dispensers. We added a feature to make them easier to fill and clean. We realized that some animals would require especially thick-walled objects in order to prevent teeth or antlers from puncturing the item. We were again amazed by the destructive potential of an elk in full rack! All of these lessons were applied to our new enrichment devices.

The result, although still a work in progress, is a selection of enrichment items in various sizes, shapes, strengths, and naturalistic colors. They can be hung, tethered, floated, rolled, thrown, sat on, and generally, put through the ringer. All items are made of nontoxic material. Many items are suitable for small mammals and birds. A rhino's toy could be a starling's nestbox. Shapes include "logs", "gourds", "icebergs", "swings", and "rafts", among others. Each shape and size can be ordered in your choice of naturalistic colors (brown, green, white...). Objects can be ordered as "toys" or "feeders".



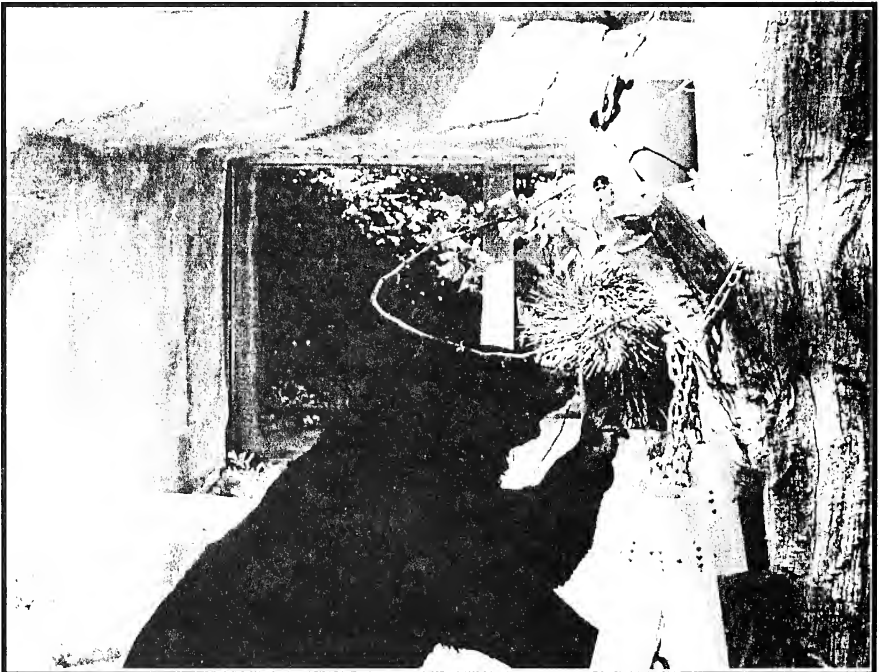


1.0 Red kangaroo, Eli, rolls a “small tube feeder” to disperse fruit pieces.



A family of Cape Thick-knees hunts for crickets, as they emerge from a “small tube feeder”.

*Photos provided by the author.*



1.1 Asiatic Black Bear, Hot Lips, munches browse from a “brown, medium log feeder”.



“Toys” are solid polyethylene with no holes. All toys will float, even if filled with water. Many have rounded corners to help prevent strong jaws from getting a good grip. Irregular shapes make movement unpredictable, and decrease the likelihood of toys going straight into the pool or moat.

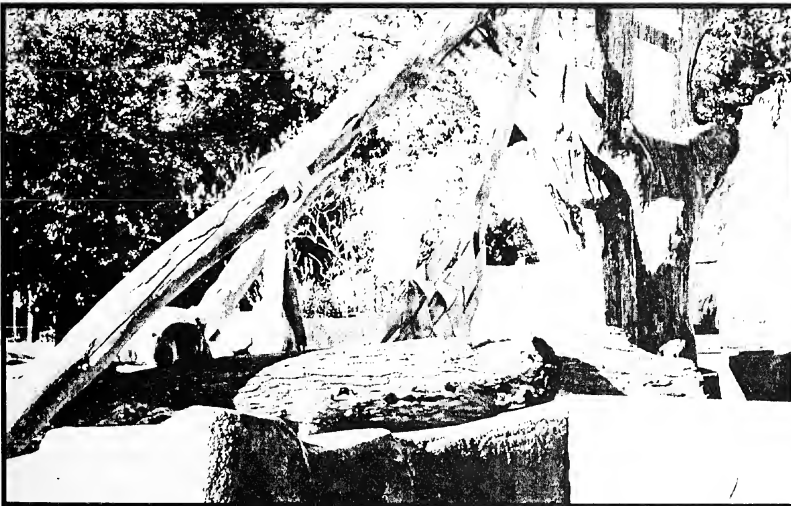
“Feeders” have strategically-placed holes and come with a screw-capped end for filling and cleaning. A few species we tested were able to remove the access cap, so especially dexterous animals should be given feeders without the cap, specifically “NO CAP” at time of order. Replacement caps are available, in case you underestimate an animal, and “for example” find your elephant chewing it like a piece of bubble gum! If you prefer to design your own food dispenser, order the item as a “Toy”, and drill your own holes—the possibilities are endless!

As we all know, animals can always surprise you. Destroying enrichment is often their main objective! A word from the wise, consider the animal’s extended reach, if the object can be stood on. All animals should be offered new items with supervision. New products are continually being developed.

If you have any questions or suggestions, feel free to contact me or Kracor, Inc. Once you’ve tried out your new item, let us know what you think. To receive a product list or place an order, contact Kracor, Inc., (800) 255-6335; fax – (414) 355-8783; or you may email – [customerservice@kracor.com](mailto:customerservice@kracor.com)<



1.0 Western Lowland Gorilla, Hodari, rests on a “raft” with his browse



0.1 Alaskan Brown Bear in a hammock beneath a hanging “medium log feeder”.

*(Ideas appearing in this column have not necessarily been tested by the editors for safety considerations. Always think ahead and use good judgement when trying new ideas. You are invited to submit materials for the Enrichment Options Column. This might include recipes, toys, puzzle feeders, olfactory enrichment ideas, etc. Drawings and photos of enrichment are encouraged. Send to: AKF/Enrichment, 3601 S.W. 29th St., Suite 133, Topeka, KS 66614-2054. Eds.)*

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# Think You're Too Old To Have Fun?

By

Bryan Martin, Senior Trainer  
New England Aquarium, Boston, MA

## Abstract

Tyler, a 20-year-old male California sea lion (*Zalophus californianus*) at New England Aquarium (NEA), exhibited a stereotypic pattern of lap swimming in his pool. Generally, enrichment activities help to minimize stereotypic behavior, but Tyler did not seem particularly interested in play sessions. The staff of NEA set out to teach Tyler "how to play" in an effort to show him that playing with something or someone can be reinforcing.

Initially, typical training methods were used and over time Tyler began to develop his own style and favorite activities. Tyler now initiates some interactions with toys or trainers and has decreased his lap swimming. This article will describe how "play" was trained and future plans to maintain Tyler's interest.

## Introduction

The Marine Mammal Department at the New England Aquarium formalized an enrichment program for its pinniped collection in late 2000. By March of 2001, the program consisted of daily scheduled enrichment, enrichment records and a rating system. We rate each interaction from 1 to 5 with 1 showing the most interest. Over the first year, the ratings provided baseline graphs showing trends and animal specific favorites. Tyler, a 20-year-old male California sea lion was observed to have little to no interest in enrichment activities and maintained a stereotypic pattern swim. Possible explanations for this behavior included that he didn't "like" toys or that he was an older animal and older animals tend not to "play" as much as younger animals.

A program was developed and designed to attempt to increase Tyler's enrichment activity and reduce the stereotypic pattern swimming. The program would view "playing", or engaging in an enrichment activity, as a trainable behavior. The goal would be to train enrichment behaviors, then fade out primary reinforcement with the hope that Tyler's enrichment activity would become self-reinforcing. This paper will discuss the training process and results so far.

## Training, Fading and Sea Lion Cheerleaders

The formal training process occurred over an 11-month period. The first training session was on 15 February 2002 and the last formal training session was on 27 December 2002.

To start Tyler's "enrichment training", we used his previous experience with innovative training. During an innovative session, Tyler would receive a signal, be reinforced with fish for each new behavior and get the signal again. Repeated behaviors were not reinforced and Tyler was given another innovative signal. For "innovative enrichment", play items were placed around or on Tyler and he was given a new Sd that looked like a "whatever" gesture with both hands. He was reinforced with fish only for touching or interacting with an object or the trainer. Fresh water hose spray and trainer's hands in the water were also offered as potential interactions. Any behavior in the spray or interaction with the trainer's hands was reinforced. Initially, repeat behaviors such as touching a toy twice with the same flipper were not reinforced. I hoped to strengthen the concept of interacting in different ways with the objects. Over time, Tyler was allowed to do some repetition as play is typically a group of some repeated behaviors.

Three weeks after training began, we quickly faded out the "innovative objects" signal. The signal was given once at the start of sessions. Tyler was then bridged and reinforced for offering the behaviors without a signal. After two sessions, the signal was no longer used. Primary reinforcement (fish) went to a random schedule. Within a month of training, secondary reinforcers (new objects and a trainer clapping/cheering) were introduced. One session Tyler interacted and he was bridged but I

threw in another toy and cheered instead of using fish. Tyler quickly interacted with the new toy and was reinforced with fish. After a few sessions of this, the bridge was more likely to be followed by the secondary reinforcers. During this phase, a few sessions were done in the public presentation area and the audience was asked to yell and clap when Tyler interacted with toys. This seemed to be fun for everyone.

To distinguish training sessions from enrichment sessions for Tyler, training sessions had a bucket of fish visible while enrichment sessions just had a trainer and some enrichment option. Enrichment sessions could be followed by a training session and vice versa. For clarity, every training session was followed with an end-of-session signal before an enrichment session began. Outside of sessions, Tyler would be reinforced if he was observed playing on his own, but the reinforcement varied from a jackpot of fish, a single fish, a new toy or the attention of a trainer. All of these events occurred on a random schedule as I continued to reduce the use of fish. With cheering/ clapping and toys as reinforcement, the training sessions ended in December of 2002.

### **Tyler's Reaction**

Tyler's initial learning of "innovative objects" occurred within a month. As the program continued, Tyler was continuously offering more unique behaviors and combinations. In innovative sessions, it is not uncommon for an animal to repeat a specific pattern of behaviors. While this patterning can be discouraged by reinforcing only behaviors outside the pattern, we never saw specific patterns develop with Tyler. Outside of training sessions, he was starting to interact with toys on his own by pushing them around, holding them in his flippers and tossing them. We have seen Tyler's interaction and duration of interaction increase as well as his spending time watching other sea lions engaged in activity. He has also become interested in some direct trainer interaction, specifically having his hind flippers and back scratched. He never exhibited this behavior before but now actively seeks it. Tyler has gained trainer attention by barking at them and offering his hind flippers. While being scratched, he occasionally drifts away from the trainer. Sometimes, when the trainer starts to leave, Tyler roars and quickly come back for more. In addition, we have observed some dominance by Tyler over a younger male when toys are introduced to both of them. Overall, Tyler's enrichment activity has dramatically increased. (Graphs 1 and 2) He has even engaged in several enrichment sessions that have lasted over 40 minutes at a time.

### **Future Plans**

The "enrichment training program" has been so successful with Tyler, we will incorporate it with other animals. We will continue to find novel activities and do more training with enrichment items. We have a brush board that seems like a good rubbing spot, but none of the sea lions seem to know why it's there.

### **Conclusion**

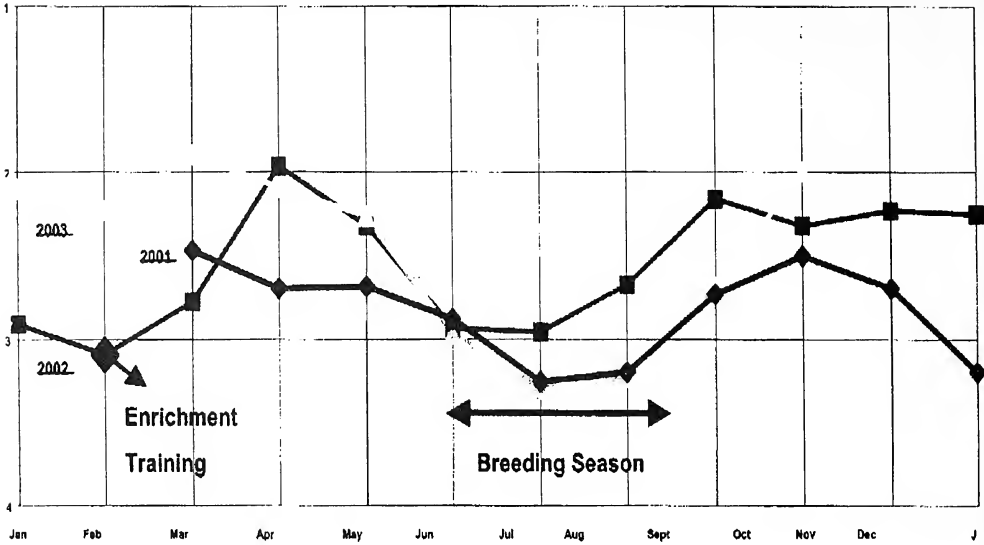
By viewing enrichment activity as just another behavior to train, we have found that Tyler, an "unplayful" animal, can become more interested. Instead of treating environmental enrichment as something separate from training, the two can be used together. In training we guide the animal step by step to build the behavior. Can the same concept apply to enrichment? "Play" is often times learned behaviors. A trained sea lion will target when presented with a target pole but what does he do with that chew toy you just threw in? Enrichment activity is their choice but what if they are not aware that they have the choice? We cannot expect them to engage in behavior they may not have in their repertoire - yet. As trainers, our possibilities are virtually limitless so training doesn't have to be just husbandry and show behaviors.

Was Tyler originally "not interested" in enrichment or did he not know what he could do? We'll never know for sure but what we do know is that he is definitely not "too old".

### **Acknowledgements:**

I would like to thank my co-workers for their help in training suggestions, observation and recording. I would also like to thank Sue Negrini from Six Flags Marine World for sharing enrichment ideas and her help with creating our toy tracking system.

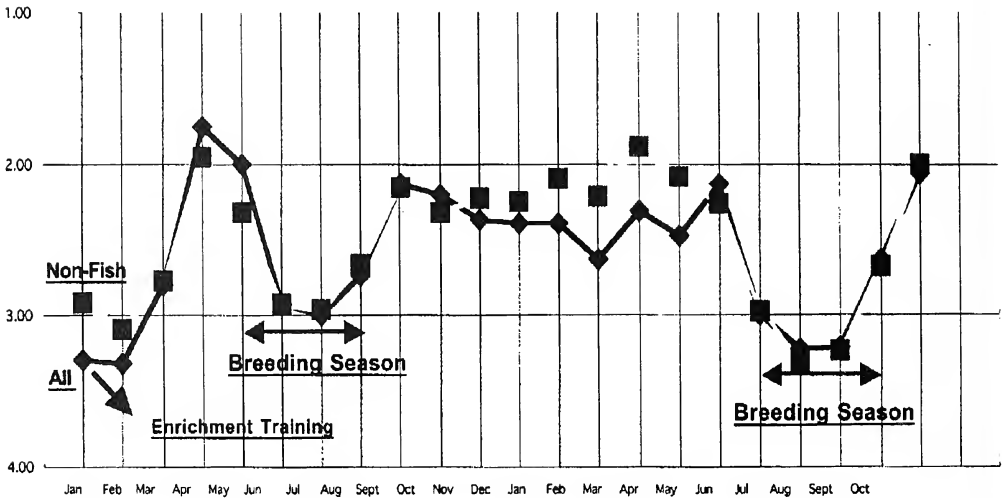
**Tyler Enrichment Ratings 2001-2002-2003**



**Graph 1. Tyler Enrichment Ratings: 2001-2003**

2001 is the baseline year of rated enrichment interactions for Tyler. February 15, 2002 is the start date of the program. December 2002 marks the end of formal “training” sessions. 2003 represents Tyler’s new average ratings with no training sessions in that time period. All three years follow the trend of seasonal weight gain, lack of overall interest and molt.

**All Enrichment vs. Non-Fish Enrichment 2002-2003**



**Graph 2. All Toys vs. Non-Fish Toys: 2002-2003**

Compares the preference of fish used in enrichment on Tyler’s average ratings. The graph shows that Tyler has no preference towards fish toys (fish ice blocks, in water bottles, etc.) and, in some cases, interacts with non-fish objects more.

# Chapter News Notes

## Rocky Mountain AAZK Chapter

The Rocky Mountain AAZK Chapter has had a busy year raising over \$15,000 from our various fundraisers. Over the past year we have successfully hosted the 2003 Rhino Keepers' Workshop, held several bake sales, given behind-the-scenes training tours, raffled off a Valentines Day gift basket, and had a small, but worthwhile Bowling For Rhinos. Not only were we able to donate a significant amount of money for seven different causes, but we were able to send five AAZK members to various conferences as well!



Right now we are busy getting ready for our biggest fundraiser of the year, Comedy Night. With different comedians doing their show, keepers putting on their own comedy routine and both a silent and live auction, we hope to beat last year's earnings of \$10,000 to help with the upcoming year's conservation efforts for Okapi, Jaguars, Snow Leopards and bushmeat projects.

We recently held elections for new officers and the results are:

President.....Laura Pike  
Vice President.....Dave Johnson  
Secretary.....Nicole King  
Liaison.....Beth Carroll-Vasquez

We look forward to an eventful and equally successful 2004-2005!

--Beth Carroll-Vasquez, Liaison



## AAZK Cheyenne Mountain Zoo Chapter

CMZ is pleased to announce the new 2004 officers:

President.....Megan Ryder  
Vice President.....Jenyva Turner  
Treasurer.....Kathy Ober  
Secretary.....RoxAnna Breitigan  
Chapter Liaison.....Jackie Moore

These new officers would like to thank the previous officers - President Heidi Genter and Treasurer Kim Pike for all their dedication and hard work in the past few years.

We have had a couple of financially successful years and have been able to give some generous donations. We were able to give towards the AAZK Chapter Challenge, the BOS organization, help in sending keepers to conferences and purchase some great enrichment toys for the animals at CMZ.

We just had another successful Art on the Hoof event. The Chapter raised over \$3400.00 and all who attended had a great time and went home with a unique and special piece of art.

We also just hosted the first CMZoolympics which turned out to be tons of fun. Keepers competed in a grain sack race, hay barn loading race, Name-that-Chow game, and Make-that-Diet game. All the prizes awarded were enrichment items to take back and use in their areas. Lots of laughs were had and it was decided this should definitely be an annual, if not bi-annual, event.

Our upcoming fundraisers include Bowling for Rhinos and a CMZ Animal Butts Calendar which will be available for purchase for the holidays.

All of us here on the mountain wish all other Chapters a fun and prosperous year!

*--RoxAnna Breitigan, Chapter Liaison*



### AAZK Milwaukee Chapter

In early June, our zoo held its annual Conservation Weekend. The theme was Backyard Habitats. We had several brochures and handouts available containing information from composting to environmental landscaping to bird and bat house construction. Again, our \$1 grab bags were a hit with the kids, and we managed to raise \$310.00 from them. The money will go toward our latest project which is creating a backyard habitat display that will line one of the boardwalks in our zoo. This display will include information and examples of what we presented in our conservation weekend booth.

*---Earl Conteh-Morgan, Liaison*

### AAZK Tucson Chapter

Reid Park Zoo and the Arizona-Sonora Desert Museum (ASDM), both located in Tucson, AZ, have teamed up to form a new AAZK Chapter. In June we adopted a new logo. It consists of an anteater (Reid Park Zoo) inside the paw print of a mountain lion (ASDM). It was designed by Stacey Belhumeur, Reid Park Zoo and Vice President of the AAZK Tucson Chapter. We look forward to a wonderful 1st year!

*--Stacey Belhumeur, Vice President*

## CHAPTER LOGOS

Does your Chapter have a new logo? Please keep us up-to-date if you change your Chapter logo.

Also, new Chapters are encouraged to send in a copy of their logo as soon as they adopt one.

Logos may also be sent as graphic file attachments (tiff or jpeg) to the email address listed below.

We will be producing another Chapter Logo Registry in 2005, so make certain the logo in our file is your most current one. When sending in logos, please include name of the artist/designer, date logo was adopted, and what, if any, significance is in the design - animals represented, etc.

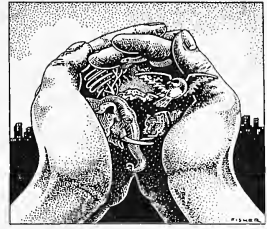
**What's your AAZK Chapter been up to? Send your Chapter News to the Editor at:  
[akfeditor@zk.kscoxmail.com](mailto:akfeditor@zk.kscoxmail.com)**





# Legislative/Conservation Update

Compiled by Georgann Johnston  
Legislative Advisor  
Sacramento, CA



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## “Extinct” Bird Rediscovered in Mexico

The Cozumel Thrasher (*Toxostoma guttatum*), a bird not seen or recorded by scientists for close to a decade and thought by some to have gone extinct, was sighted in June 2004 by a team of field biologists in Mexico. Its rediscovery immediately makes it the single most threatened bird in that country.

The Cozumel Thrasher, an endemic bird found only on the island of Cozumel off the Yucatan Peninsula in Mexico, appears to have experienced a precipitous decline in 1988 after Hurricane Gilbert tore through the island. It immediately became rare, but small numbers of the bird were known to exist until it was last sighted in 1995. That same year, Hurricane Roxanne ripped through Cozumel and may have also contributed to the species’ decline. Scientists estimate that as many as 10,000 once thrived on the island.

Previous recent expeditions to find the Cozumel Thrasher proved futile. In June 2004, a team of field biologists working in conjunction with Villanova University and the Mexican counterpart of the Island Endemics Institute, spotted a single individual, confirming that the species was not yet extinct. The field biologists were on a rediscovery mission sponsored by American Bird Conservancy and Conservation International.

“This is terrific news for the species,” said Dr. George Wallace, vice president for International Programs at American Bird Conservancy. “It opens a door to a range of possibilities that we hope will lead to the establishment of a protected area if more birds are found.”

“The rediscovery of the Cozumel Thrasher is a reminder of two key things: the importance of tropical islands for biodiversity conservation, and the importance of never giving up on a species - no matter how rare,” said Dr. Russell Mittermeier, president of Conservation International.

Although the hurricanes are believed to have had a major negative impact on the birds, scientists believe that other factors must have contributed to the decline, because the Cozumel Thrasher likely survived hurricanes for millennia. Introduced species, especially predatory boa constrictors introduced to the island in 1971 and now abundant, may also have had a disastrous effect. Fortunately, large tracts of deciduous and semi-deciduous forest, thought to be the species’ preferred habitat, still remain, and the birds are not hunted or trapped for the pet trade. Formal protection and management of Cozumel’s habitat could benefit other species on the island, including 17 other endemic bird species, fifteen endemic bird subspecies and at least two threatened mammal species. *Source: Joint Press Release of American Bird Conservancy and Conservation International, 9 July 2004*

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## Canada in Compliance With Most, But Not All, Provisions of CITES

TRAFFIC North America, a division of the World Wildlife Fund, has issued a report entitled “CITES, Eh? A Review of Canada’s Implementation of CITES Under WAPPRIITA.” It provides an overview and evaluation of Canada’s implementation of CITES. One purpose behind the investigation and report was to see how well Canada was complying with various CITES provisions in conjunction with that country’s Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act (WAPPRIITA).

WAPPRIITA prohibits the import and export of CITES specimens except with a permit or where permitted by the regulations. In addition, The Act prohibits the import into Canada of an animal or plant, or any part thereof, that was taken or possessed in contravention of any foreign law, making it an offense to possess specimens which have been imported in contravention of the legislation or to offer CITES Appendix I specimens for sale.

Canada signed the CITES agreement in 1975 but did not pass the enabling legislation until 1996. The TRAFFIC study concluded that WAPPRIITA provides a legislative basis for the regulation of trade in CITES species along with significant penalties for violations. However, the report also concluded that CITES does not appear to be a priority for the Canadian government as a whole or for Environment Canada, the department charged with ensuring that the Convention is effectively implemented. Insufficient human and financial resources have been directed at administering and enforcing the convention and, as a result, significant gaps remain.

One major criticism found in the report is the lack of documentation regarding permits for trade in CITES protected species. Other significant gaps include a lack of a policy for implementing CITES decisions and resolutions, and Environment Canada's inconsistent record for meeting the requirements of WAPPRIITA to amend the Act within 90 days after any changes to the CITES appendices.

A complete copy of the TRAFFIC report may be obtained from or by writing to TRAFFIC, c/o WWF, 1250 24th St. NW, Washington, DC 20037. *Source: TRAFFIC Report, a Publication of TRAFFIC North America, vol. 3, #1, May 2004*

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### **CITES Conference Set for October 2004**

The Government of Thailand will host the 13th Conference of the Parties to CITES in Bangkok from 2-14 October 2004. The meeting will be preceded by the sixth dialogue meeting of the African elephant range States and the 51st meeting of the CITES Standing Committee.

Working documents, proposals to amend Appendices I and II and the provisional assessments by the Secretariat of the proposals are available at <http://www.cites.org/eng/cop/index.shtml>. The deadline for parties to provide their comments on the provisional assessments is 1 August 2004.

One of the proposals being evaluated by the signatories to CITES deals with the categorization of DNA, cells and cell lines that are in some way related to species protected under Appendix I or II. More specifically, Resolution No. 1 provides that the following should be exempted from regulation: (a) *in vitro* cultivated DNA that does not contain any part of the original from which it is derived; (b) cells or cell lines cultivated *in vitro* that theoretically at a molecular level do not contain any part of the original animal or plant from which they are derived; (c) medicines and other pharmaceutical products such as vaccines, including those in development and in process materials, that theoretically at a molecular level do not contain any part of the original animal or plant from which they are derived; and (d) fossils.

Other Resolutions deal with the transfer of the Irrawaddy dolphin (*Orcaella brevirostris*) from Appendix II to Appendix I; transfer of certain populations of the northern minke whales (*Balaenoptera acutorostrata*) from Appendix I to Appendix II; and various proposals regarding increased trade in skin, hair, and ivory from African elephants (*Loxodonta africana*) located in a number of African countries. *Source: CITES Press Release 14 June 2004*

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### **Mute Swans Subject of Pending Legislation**

The U.S. House of Representatives is considering a bill called the Migratory Bird Treaty Reform Act (H.R. 41145) which would exempt "non-native" species from the Migratory Bird Treaty Act of 1918. This would strip species such as the mute swan (*Cygnus olor*) and giant Canadian geese (*Branta canadensis maxima*) of the protections that have been afforded them since the early 1950s.

The legislation is being promoted by various hunting and gun groups as well as the Audubon Society, Nature Conservancy, World Wildlife fund and Defenders of Wildlife. The claim is that these birds are a threat to scarce native trumpeter swans.

Opponents of the bill include 35 animal advocacy groups, headed by The Fund for Animals. A spokesperson for the Fund for Animals said that the proposed amendment to the Migratory Bird Act is based on the "mute swan becoming a scapegoat. While some environmental and birdwatching organizations have lined up in favor of the Act, these groups arbitrarily value some bird species over others - an opinion based on aesthetic and recreational values, not science." *Source: Animal People: News for People Who Care About Animals, vol. 13, #4, May 2004*

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### **Florida Coral Species May Get ESA Protection**

Elkhorn coral, staghorn coral and fused staghorn coral, found in the Florida Keys, may be the first coral species to be protected under the Endangered Species Act, according to a report from the *Associated Press*. The National Oceanic and Atmospheric Administration's National Marine Fisheries Service agreed to recommend that the species be listed as threatened. A group of experts will make an official decision by March. Many have been destroyed by coral bleaching, boat groundings and disease. In the Florida Keys, more than 90% of these species of coral have died in the past few decades, said Cheva Heck, spokeswoman for the Florida Keys National Marine Sanctuary. *Source: GREENlines Issue 2141 7-5-04*

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### **Himalayan Wolves (*C. lupus chanco*) Are Oldest Canids**

*BBC News* has reported that DNA tests on an endangered variety of Indian wolf suggest it might be the most ancient representative of the animals anywhere in the world. Analysis of genetic material from one of the endangered Himalayan wolves shows that its lineage stems back around 800,000 years. Hunting and loss of habitat have sharply reduced the Himalayan wolf population, which is estimated to be around 350. *Source: GREENlines Issue# 2131 6-19-04*

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### **Rhinos Found in Viet Nam**

The Viet Nam News Agency has reported that recent surveys in the Cat Tien National Park have found seven Javan rhinoceros (*Rhinoceros sondaicus*), a species once thought to be extinct. The Javan rhino and its Sumatran cousin were once common throughout Viet Nam. However, the Sumatran rhino (*Dicerorhinus sumatrensis*) had disappeared from Viet Nam by the early 20th century and the Javan rhino was erroneously thought to be extinct by mid-century. *Source: GREENlines Issue# 2139 6-30-04*

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### **House Passes Legislation To Protect Endangered Sea Turtles**

The U.S. House of Representatives has passed the Marine Turtle Conservation Act (H.R.3378), according to a report by the *U.S. Newswire*. Maryland Congressman Wayne Gilchrest (R-1st) sponsored the bi-partisan bill that authorizes \$5 million a year for international conservation projects protecting nesting sea turtles and their habitat, and will help to thwart illegal trade in sea turtle shell, meat and eggs. A similar bill passed the Senate in October of 2003. Small differences between the Senate and House versions need to be resolved before President Bush can sign the bill into law. Six of the world's seven sea turtle species are listed under the U.S. Endangered Species Act, including the 1,000-plus pound leatherback sea turtle (*Dermochelys coriacea*), one of the world's largest reptiles. *Source: GREENlines Issue #2129 6-16-04*

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### **Spanish Police Seize Poached Ivory**

Spanish police have seized nearly three tons of poached African ivory in Madrid, which experts estimate could have caused the death of hundreds of elephants. The Civil Guard's environmental arm Seprona began a probe last year after confiscating 240 pounds of elephant hair, some of which had been turned into jewelry. They subsequently found 3.4 tons of raw and worked ivory in a store in Madrid, whose owner had a license to keep less than 1,100 pounds, and confiscated the surplus. According to experts' initial estimates, the ivory seized could have come from the sacrifice of more than 400 animals. Trade in ivory has been banned worldwide since 1990 by the Convention on International Trade in Endangered Species, an international agreement to which 166 governments adhere. The agreement has allowed some one-time sales of ivory by South Africa, Namibia and Botswana, despite opposition from animal rights' activists. A report by Save the Elephants last year said China was the destination of much of Africa's smuggled ivory. *Source: Reuter's News Service 7-2-04*

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### **Traffic Lights For Tibetan Antelope**

China has put up traffic lights on the Qinghai-Tibet highway in Hoh Xil area in northwest China's Qinghai Province to protect endangered Tibetan antelope as they migrate, according to the *Xinhua Online*. The traffic lights will stop traffic on the highway for 20 minutes at a time, allowing the pregnant antelope to cross in the migration to give birth to young in northwestern China. "We also want to arouse the attention of the general public to treat wild animals equally," said the director of the Hoh Xil Nature Reserve Administration. *Source: GREENlines Issue #2142 7-6-04*

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### **China Creates Reserve For River Dolphin**

A 6,803 hectare nature reserve will be created in Poyang Lake, prime habitat for the endangered Yangtze River dolphin (*Lipotes vexillifer*), reports *Xinhua Online*. The nature reserve will be China's largest of its kind in terms of area. Said to be the only freshwater river dolphin in the world, the Yangtze River's dolphin is nicknamed by local fishermen as "God of the River". The river dolphin's population is declining at a rate of 7.3 percent per year. *Source: GREENlines Issue #2140 7-1-04*

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### **"Gorillas in the Mist" Home Threatened by Illegal Logging**

The gorillas made famous by "Gorillas in the Mist" are threatened by a surge in illegal logging in Virunga National Park, a World Heritage Site, according to a report by World Wildlife Fund. A recent influx of people from Rwanda and the Democratic Republic of Congo have illegally cut more than six square miles of forests in Virunga which threatens to cut off three family groups, consisting of about 50 gorillas, from the rest of the park. There are only about 700 mountain gorillas (*Gorilla gorilla beringei*) left in the world in the lush mountains and volcanoes straddling Rwanda, Uganda and the anarchic Democratic Republic of the Congo, and any loss of remaining habitat can push them closer to extinction. *Source: GREENlines Issue #2143 7-7-04*

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### **Mexican Wolves Can Stay in Arizona and New Mexico**

U.S. District Judge M. Christina Armijo ruled in favor of the Mexican wolf reintroduction program over the objections of counties and ranchers, reports the Associated Press. A group calling itself the Coalition of Arizona-New Mexico Counties for Stable Economic Growth, along with eight other groups, filed a motion for an injunction against the U.S. Fish and Wildlife Service's reintroduction program last October saying that wolves have attacked cattle and could breed with dogs to create a hybrid species. Judge Armijo ruled that, "the animals' survival is more important than minor economic losses." *Source: GREENlines Issue #2144 7-8-04*

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### **Scientists Oppose US Airport in Endangered Dugong Habitat**

"A U.S. military heliport planned for construction on a healthy coral reef off Okinawa's east coast is drawing opposition from coral reef scientists and environmental advocates," according to *Environmental News Service*. During the 10th Annual Coral Reef Symposium in Okinawa in early July, "889 coral reef experts from 83 countries signed a resolution calling on the governments of Japan and the United States to immediately abandon their joint plan to construct the base." The proposed construction would cover the Henoko reef, which is "known to be rich in biological diversity and is the northern habitable limit of the critically endangered Okinawa dugong (*Dugong dugon*), an internationally protected marine mammal." Japanese and American conservation organizations, including the Center for Biological Diversity and the Dugong Network Okinawa, filed a lawsuit last year against the U.S. Department of Defense opposing the project. *Source: GREENlines Issue #2147 7-13-04*

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### **Bush Administration Weakens Endangered Species Protection**

"The Bush administration has succeeded in reshaping the Endangered Species Act in ways that have sharply limited the impact of the 30-year-old law aimed at protecting the nation's most vulnerable plants and animals," according to the *Washington Post*. The changes, such as limiting the number of species protected by the ESA, using economic analysis to exempt land from critical habitat protection, and relying on voluntary actions to protect wildlife, "reflect a policy shift that Interior Secretary Gale A. Norton calls the 'New Environmentalism' ". Academics, conservationists and some career federal officials "question recent proposals that would let the U.S. Forest Service decide whether fire prevention projects pose a threat to key species and allow the Environmental Protection Agency to make that call on pesticides." In addition, members of Congress "are reviving plans to seek changes in the act to make it harder to list endangered species and declare habitat off-limits." *Source: GREENlines Issue #2146 7-12-04*

*Editor's Note: GREENlines Issues are a daily news digest from the Endangered Species Coalition about imperiled species and the people working to stop extinction. For more on what you can do visit - <http://www.stopextinction.org>*

*Institutions wishing to advertise employment opportunities are asked to send pertinent data by the 10th of each month to: Opportunity Knocks/AKF, 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054. Please include closing date for positions available, and when setting these dates keep in mind that because of bulk-mail, most readers do not receive their AKF until the middle of the month or later. There is no charge for this service and fax or e-mail listings of positions which become available close to deadline are accepted. Our Fax is (785) 273-1980; e-mail: akfeditor@zk.kscoxmail.com< Listing must be sent as MS Word attachment. To post a position on the AAZK website, have listing to email address above by the 25th of the month for posting on the first day of the following month. We are no longer located at the Topeka Zoo, so*

#### **Zookeeper/Natural Encounters - Houston Zoo, Inc., Houston, TX**

Interested parties please send cover letter and resumé with a list of references to: Tinker Boyd, Curator of Natural Encounters, Houston Zoo 1513 N. MacGregor Drive, Houston, TX 77030. 713-533-6523. The Houston Zoo, an equal opportunity employer, is currently seeking an individual for a keeper position working in the Natural Encounters department. This department is composed of various species of birds, small mammals, reptiles and invertebrates with a strong focus on training and guest interactions in the form of public educational presentations. **Requirements:** The successful candidate for this position needs to be a motivated, energetic, and a team orientated individual with good problem solving, written and oral communication, organizational and interpersonal skills. Candidates with a degree in the biological sciences or related discipline and at least one year paid experience in zoo setting preferred. Candidate must be able to work weekends and holidays and lift 50 pounds. **Responsibilities:** include, but not limited to, daily presentations, providing daily husbandry, enrichment, training, observation, exhibit maintenance, and record keeping for this department.

#### **Animal Caretaker/Resource Naturalist - Calusa Nature Center and Planetarium, Fort Myers, FL**

Must email resume and cover letter to [Michael@CalusaNature.com](mailto:Michael@CalusaNature.com). No calls please. Visit website at [CalusaNature.com](http://CalusaNature.com)< **Responsibilities:** Responsible for overseeing the Center's collection of live animals. Responsibilities include live animal resource acquisition, care and maintenance. The Resource Naturalist ensures that all center animals are cared for and maintained according to all legal requirements, and that live animal exhibits are in good condition. Staff serve as an ambassador for the Calusa Nature Center and Planetarium. Reports to Executive Director. Maintains all Calusa Nature Center and Planetarium animals in compliance with all State and Federal regulations. Ensures that all resources necessary for natural history and operations are acquired and maintained in good working order. Present daily live animal programs or "Meet the Keeper" presentations to a small audience of visitors. Maintain visibility and strengthen the image of the Calusa Nature Center and Planetarium by serving as a community resource for natural history issues and by carrying out positive community relations activities. Provide other operational support services for Calusa Nature Center and Planetarium programs as requested by the Executive Director. **Requirements/Qualifications:** Bachelors Degree in zoology, biology, environmental science or a related field equivalent training and knowledge. Three (3) years full-time experience. Experience to carry permits for the care of venomous snakes, alligators, crocodiles, birds of prey, and mammals such as bobcat, raccoon and opossum. Strong organizational, problem-solving, teaching and computer skills. Ability to work effectively both independently and as a team player. Willingness and capability to work weekends and holidays. Cheerful and outgoing demeanor. Be neat and clean in work areas and creative with exhibit designs. It is a physically demanding position that requires working outdoors in the Florida weather. Salary Range: \$25-30K with full benefits.

#### **Zoo Keeper (Elephant and Large Mammal) - The Toledo Zoo, Toledo, OH**

For consideration submit resumé using only one of the following three (3) methods: Mail to - Re: Zoo Keeper, The Toledo Zoo, P. O. Box 140130, Toledo OH 43614-0801; email to - [hr@toledozoo.org](mailto:hr@toledozoo.org) or Fax: (419) 389-8670. The Toledo Zoo has had a Free Contact elephant management program for over 20 years. This has included a successful reproductive program using artificial insemination, and the birth of a male calf. Future planning includes an exhibit expansion to house the calf and training is in progress for FC & PC management of the bull calf. The Elephant Management Team utilizes the S.T.A.R.S. (Standardized Training and Reinforcement System) program. Additionally, the Zoo is searching for another reproductively sound female African elephant for the collection. **Responsibilities:** primary responsibilities will include all facets of elephant care, but may also include care of other animals in a diverse large mammal collection. These responsibilities include: care/observation of animals, cleaning/maintenance of exhibits, training/enrichment, and record maintenance. **Requirements:** The Toledo Zoo is accepting resumé from those dedicated to, and willing to work and communicate within a team-oriented environment. Only those candidates fulfilling the requirements of a minimum of one (1) year paid work experience in a free contact elephant environment will be considered. Prefer a degree in a related field, but experience may be considered in lieu of a degree. Must have a valid driver's license and be insurable by the fleet insurance carrier. The starting hourly rate is \$12.34 per hour with progressive increases and an excellent benefits package. The Toledo Zoo is an Equal Opportunity Employer and participates in a Drug & Alcohol Free Workplace program. **Position will remain open until filled.**

### **Animal Keeper** – Buffalo Zoo, Buffalo, NY

Submit resumé and cover letter to: Kevin J. Murphy, Buffalo Zoological Gardens, 300 Parkside Avenue, Buffalo, NY 14214. The Buffalo Zoo is accepting applications for an Animal Keeper to work in its brand new sea lion/otter facility scheduled for completion September and November 2004. **Responsibilities:** Will work daily in the husbandry, training, handling and enrichment of California sea lions and river otters. **Requirements:** The Zoo is seeking a highly motivated keeper/trainer that thrives in a team environment. Must obtain a NYS non-CDLC driver's license upon completion of probation. The selected candidate will have excellent record keeping skills. Position requires an AAS degree (bachelor's preferred) in a zoology/biology related field. One (1) year paid experience in the husbandry/training of pinnipeds required. Public speaking experience and familiarity with aquatic life support systems required. Scuba certification a plus. EOE.

### **Area Supervisor** – Wildlife Waystation, Angeles National Forest, CA

This position, which is available immediately, will be paid commensurate with experience. Please e-mail cover letter and resumé to [cj@wildlifewaystation.org](mailto:cj@wildlifewaystation.org) < **Responsibilities:** Supervise both section keepers and volunteers in the care, feeding, cleaning and enrichment of an eclectic assortment of wild and exotic animals. (i.e.: bears, primates, large cats, coyotes). **Requirements:** Will work closely with veterinary staff and must have good people and organization skills. Must have prior paid animal experience including a working knowledge of USDA husbandry regulations. TB test and blood panel required prior to beginning work.

### **Zookeeper** – Trailside Museums and Wildlife Center, Bear Mountain State Park, Bear Mountain, NY.

Send resumé by **15 August 2004** to: Trailside Museums & Wildlife Center, Bear Mountain State Park, Bear Mountain, NY 10911 Attn: Barbara Thomas, Assistant Director. Bear Mountain State Park is a facility that houses native non-releasable animals in a zoo setting. We are seeking a full or part-time keeper. **Responsibilities:** covers all areas of zoo work including husbandry, diet preparation, animal enrichment, and interaction with the public. **Requirements:** a qualified applicant will have a background in zoology, environmental science, or related studies, as well as prior experience at a zoo, animal hospital, etc. Must be detail oriented, self-motivated, dependable, have excellent communication skills, reliable, efficient, and have a good attitude.

*The following two (2) positions are available at the Kentucky Reptile Zoo, Slade, KY. To apply for either position, send a cover letter, resumé, transcript, and at least 2 (preferably 3) references to: Kristen Wiley, Internship Coordinator, Kentucky Reptile Zoo, 200 L&E Railroad, Slade, KY 40376; or email to: [kyreptil@pop.mis.net](mailto:kyreptil@pop.mis.net)*

### **Outreach Program Director** - Kentucky Reptile Zoo, Slade, KY

This is a full time position. **Responsibilities:** will include traveling to and giving reptile outreach programs to locations within 100 miles; scheduling and advertising the programs; and husbandry of the education animals. **Requirements:** include a bachelor's degree in related field, at least one (1) year's experience in an educational setting, and a willingness to handle snakes and other reptiles. Patience and good verbal communication skills are a must. Programs are given to schools, camps, parks and other community organizations in the area, as well as to field trips at the zoo's facility. The educator may use the zoo's vehicles to travel to programs; a valid driver's license and a good driving record are required. Kentucky Reptile Zoo's programs stress conservation and strive to include snakes and other misunderstood reptiles as part of our important natural heritage. The successful applicant will be passionate about conservation and natural history education. Pay will be based on program fees; 60% of each fee will go to the educator. This position is **open until filled**; please apply immediately if interested.

### **Internship** - Kentucky Reptile Zoo, Slade, KY

Students majoring in the biological or natural sciences are preferred. Interns are required to be either college students or recent graduates. Former interns have arranged for academic credit with their institutions. Benefits include experience with one of the most extensive and diverse collection of snakes in the United States, housing, and \$55/week to cover expenses. Interns have been successful in finding zoo keeper positions; over 95% hire rate! **Responsibilities:** The intern will assist in the captive maintenance of the zoo's reptile collection, collect admissions to the exhibit, give interpretive talks and interact with the public, assist with educational outreach programs, and perform other duties as assigned. In addition, the intern will be responsible for the completion of at least one research project related to the field of herpetology. The intern will **not** be involved in the handling of any venomous species. **Requirements:** Desirable qualifications include a willingness to handle snakes and other reptiles on a daily basis, ability to communicate effectively with people, writing skills, orientation to details, and self-motivation. The intern will be required to work Saturday and Sunday, with days off during the week. Students majoring in the biological or natural sciences are preferred. Interns are required to be either college students or recent graduates. Former interns have arranged for academic credit with their institutions. Benefits include

experience with one of the most extensive and diverse collection of snakes in the United States, housing, and \$55/week to cover expenses. Interns have been successful in finding zoo keeper positions; over 95% hire rate! Personal transportation is recommended. A valid driver's license is required. Starting dates are flexible, but a minimum of three (3) months covering fall (September-November) is required.

#### **Aviculture Interns - Hawaiian Endangered Bird Conservation Program**

Program is at the Keauhou Bird Conservation Center (KBCC) on the Big Island of Hawaii and the Maui Bird Conservation Center (MBCC) in the island of Maui. For more information on internships at KBCC, please send a resumé, cover letter, and the names and contact information of three (3) references to: Tracey Goltz, P.O. Box 39, Volcano, HI 96785 or fax (808) 985-7034. For more information on internships at MBCC, please send this same information to: Mary Schwartz, 2375 Olinda Road, Makawao, HI 96768 or fax to (808) 572-3574. PLEASE, no phone calls or emails. **Responsibilities:** daily tasks include husbandry duties such as diet preparation, aviary and facility maintenance, behavioral observations of breeding birds, grounds keeping and predator control. **Requirements:** applicant must be able to live with several roommates in a remote area and should show enthusiasm for work with captive endangered Hawaiian birds. Applicant must have a valid driver's license and health insurance. Internships last for a 3-6 month period and interns receive \$20/day stipend plus housing.

#### **Big Cat Internships - Tiger Creek Wildlife Refuge (TCWR), Tyler, TX**

As seen on Animal Planet in "Growing Up Tiger", TCWR is a division of Tiger Missing Link Foundation. **Commencement date:** On-going duration: three (3) months on a month-by-month basis. Summer (May-Aug) Internship Applications due March 1st. For contact information, application packet, additional information, and to see what past interns have to say about Tiger Creek: visit [www.tigercreek.org](http://www.tigercreek.org). Are you interested in learning more about big cats or establishing a career path working in conservation as a zookeeper, a wildlife manager or a veterinarian? You can earn your STRIPES at Tiger Creek and obtain college credit through your college or university at the same time. Right now there are up to three (3) positions available consisting of a six (6)-day work week with a strong commitment for three (3) months. At Tiger Creek you are more than a worker, you are considered a friend and we strive to build long-term working relationships as we know you are the future animal caretakers! Based upon your performance after your training, you may be eligible for any permanent animal care positions that become available. **Requirements:** At least 20 years old and a junior in college. You should be capable of paying attention to details and following safety rules; you must have your own transportation to and from Tyler, TX; and you also provide your own food while here. We provide room; uniforms; materials and curriculum; and indoctrination and safety training. The Intern House has central heat and air, a full kitchen, a shared telephone line for incoming calls, Internet access for email and surfing, a TV with VCR/DVD, even satellite so that you and the other interns can enjoy Animal Planet during your off hours! The intern house is fully furnished and dormitory-style with rooms being shared by two people. All of this and a few rescued dogs or puppies in the backyard...because we want your stay to be as comfortable as possible while here at Tiger Creek. The Tyler/East Texas area has a lot to offer, there is horseback riding available at no cost to our interns, lakes within beautiful parks, movie theaters, numerous local night clubs and plenty of restaurants and much more.

#### **Environmental Interpretation and Wildlife Care Internship - Trailside Museums and Wildlife Center, Bear Mountain State Park, Bear Mountain, NY 10911-0427.**

Contact: Jennifer Verstraete at (845) 786-2701 ext. 278 or 265; email - [clayne.keith-feller@oprhp.state.ny.us](mailto:clayne.keith-feller@oprhp.state.ny.us) Start Dates: Summer internship mid-May through mid-August; Fall internship late-August/early September through early November. Internship is unpaid, but provides knowledge and experience; written evaluation gladly given. Possible course credit if intern can arrange it. Interns will work at least three (3) days a week, including one weekend day. No housing available. We reimburse full payment for required pre-exposure rabies series. **Qualifications:** Enthusiasm, comfortable handling animals, motivated to learn. Must be 18 or older; preference given to college student looking for experience in the care of wildlife and in environmental interpretation. **Responsibilities:** 1) Provide care for permanently injured or orphaned park wildlife (mammals, birds, fish, amphibians and reptiles) in zoo setting. Under the supervision of a Senior Zookeeper will prepare food and diets, maintain enclosures and exhibits, and provide enrichment; 2) Interact with the public answering questions, interpreting exhibits, possibly developing and offering short interpretive talks.

#### **Big Cat Internship - Wildlife on Easy Street, Tampa, FL**

For more information contact Scott Lope at 813-323-5991 or email at [catfoto1@aol.com](mailto:catfoto1@aol.com) Two (2) positions available for six-month internship at TAOS accredited non-profit big cat sanctuary. [www.wildlifeoneasystreet.com](http://www.wildlifeoneasystreet.com) < **Responsibilities** (include but are not limited to): daily husbandry, exhibit cleaning, diet preparation, feeding, operant conditioning and behavioral enrichment for the following species: lions, tigers, leopards, cougars, lynxes, servals, caracals, bobcats, lemurs and other exotic animals. We provide invaluable hands-on experience, on-site housing and utilities, safety training and educational



materials. Advanced training and long-term employment opportunities exist for the right candidates. **Requirements:** applicants must be willing to work six days a week, some holidays and follow strict safety guidelines. Hard work ethic and love of animals more important than degree.

#### **Internships** - The Florida Aquarium, Tampa, FL

Internships are available in Animal Health, Animal Programs and Husbandry departments. Internships available year-round for varying lengths of time and can be tailored to the individual student's needs. Internships are unpaid but provide valuable hands-on experience. Interested persons should send resumé to: Human Resources, 701 Channelside Dr., Tampa, FL 33602. For more information visit our website at [www.flaquarium.org](http://www.flaquarium.org) < **Responsibilities:** food preparation, feeding, cleaning enclosures, assist with medical procedures, animal observations, daily record keeping, enrichment activities, assist with training sessions and shows.

#### **Zoo Design Internship** - ZooLex, Vienna, Austria

In 2002 the ZooLex Zoo Design Organization started to offer internships. Carlyn Worstell was our first intern. She finished her internship with the ZooLex Zoo Design Organization in September 2003 and is now working with the Wildlife Conservation Society at Bronx Zoo. We offer internships in Vienna, Austria. Interns who stay for a few weeks only, mainly work on the ZooLex Gallery. Interns who stay longer also complete a research project. You will find more information on ZooLex internships here: <http://www.zoolex.org/intern.html> < ZooLex Zoo Design Organization is a non-profit organization registered in Austria. ZooLex runs a professional zoo design website and distributes a newsletter. More information and contact: <http://www.zoolex.org/home.html>

**The following three (3) internship opportunities are available at the New Jersey State Aquarium** - The New Jersey State Aquarium husbandry department is currently holding open enrollment on all our internships.

#### **Avian Internship**

Interested candidates should submit a cover letter and resumé, transcripts, three (3) letters of recommendation, and an application from our website at [www.njaquarium.org](http://www.njaquarium.org). Please submit materials to: New Jersey State Aquarium, c/o Kyla Fox, One Riverside Drive, Camden, NJ 08103. Become familiar with daily activities involving our colony of African penguins, exotic birds, and reptile collection. **Responsibilities:** Duties include food preparation, exhibit maintenance, and creation of enrichment devices. **Requirements:** Candidates should be comfortable with public speaking and have course work in biology/psychology. Must be able to work outdoors and lift 50 pounds. Interns are required to complete a minimum of 120 hours and must be registered for college credits in either a two or four-year school. Internships may be completed during spring, summer, or fall sessions. All intern positions are on a volunteer basis and are unpaid.

#### **Marine Mammal Internship**

Interested candidates should submit a cover letter and resumé, transcripts, three (3) letters of recommendation, and an application from our website at [www.njaquarium.org](http://www.njaquarium.org). Please submit materials to New Jersey State Aquarium, c/o Collette Caprio, One Riverside Drive, Camden, NJ 08103. Learn daily activities involving animal care and training with our Seal Team. **Responsibilities:** Duties include food preparation, exhibit cleaning, creating enrichment devices and observing training. **Requirements:** Candidates should be comfortable with public speaking, have course work in biology/psychology, prior animal experience, be able to work outdoors, and lift 50lbs. Interns are required to complete a minimum of 120 hours and must be registered for college credits in either a two or four-year school. Internships may be completed during spring, summer, or fall sessions. All intern positions are on a volunteer basis and are unpaid.

#### **Fish and Invertebrate Internship**

Interested candidates should submit a cover letter and resumé, transcripts, three (3) letters of recommendation, and an application from our website at [www.njaquarium.org](http://www.njaquarium.org). Please submit materials to New Jersey State Aquarium, c/o Nicole Grandinetti, One Riverside Drive, Camden, NJ 08103. The Fish and Invertebrate department offers internships each semester to qualifying candidates. **Responsibilities:** The intern's main responsibilities will be assisting the biologists with their daily duties including exhibit and holding tank maintenance, food preparation, feeding, filter maintenance, and learning all aspects on maintaining saltwater exhibits. **Requirements:** Interns must complete 120 hours within the semester working two eight-hour days. The typical hours for the day are from 7:30am to 4:30pm. Interns are also required to be registered for credits through a two or four-year institution. All Interns work under a volunteer basis and are unpaid.



### **Internship Opportunities - National Aquarium in Baltimore**

To apply for any of the following internship positions go online at [www.aqua.org/education/internships](http://www.aqua.org/education/internships) to obtain an application form. A complete application includes contact information, answers to brief statements listed, and a copy of college transcript. Complete applications should be sent to: National Aquarium at Baltimore-Internships, Pier 3/501 East Pratt St., Baltimore, MD 21202.

Application Deadline: ongoing - 1 November 2004 for January and Spring terms of 2005; 1 April 2005 for Summer and Fall 2005 terms; All interns must complete a minimum of 120 hours of work within the selected term. Interns must receive college credit for their internship. Internships are unpaid. For further information contact the National Aquarium in Baltimore's Internship coordinator at [intern@aqua.org](mailto:intern@aqua.org) or call (410) 576-3888.

#### **Aquarist Intern**

**Responsibilities:** The selected candidate will assist the Aquarium aquarist staff with daily care of the Aquarium's invertebrates and fish. Assist with tank maintenance and cleaning; Prepare daily diets and perform daily feedings; Assist in the maintenance of back-up areas; Conduct precise record keeping; Perform special projects to be determined by the aquarist staff. **Requirements:** College juniors or seniors enrolled in an accredited college, pursuing a degree in Biology, Ecology, Environmental Science, or a related field. Must be able to lift 50 lbs, climb up a 6' ladder, and be able to squeeze across a 15' long x 120 wide platform.

#### **Aviculture Intern**

**Responsibilities:** The selected candidate will assist the Aquarium aviculture staff with daily husbandry activities in the South American Rainforest exhibit. Assist with and perform diet preparation and distribution; Conduct animal observations; Assist in the cleaning of holding areas, kitchen, and food prep areas; Provide enrichment to the aviculture collection; Perform special projects as determined by the aviculture staff. **Requirements:** Interest in working with birds. Enrolled in an accredited college, pursuing a degree in Biology, Zoology, Animal Behavior, Ecology, Environmental Science, or a related field.

#### **Herpetology Intern**

**Responsibilities:** Tend the "Hidden Life" exhibits (large wall terrariums where small, neotropical lizards, frogs, snakes and invertebrates are on public display); Mist and clean the off-exhibit colony of small arboreal lizards; Mist, clean and otherwise help tend the large, off-exhibit collection of neotropical frogs; Prepare diets for and feed the on and off-exhibit iguanas and tortoises; Tend the locust (live food) colony, orb-weaving spiders and colonies of non-venomous exotic arthropods (wood and hissing roaches, millipedes and walking sticks); Assist in the maintenance of the live food cultures (fruit flies, springtails, crickets, rats, mice); Conduct and record animal observations; Perform special projects as determined by the herpetology staff. **Requirements:** Must be enrolled in an accredited college, pursuing a degree in Biology, Zoology, Animal Behavior, Ecology, Environmental Science or a related field. Must be comfortable working with frogs, lizards, rodents and terrestrial arthropods.

#### **Horticulture Intern**

**Responsibilities:** The selected candidate will assist the Aquarium horticulture staff with daily activities. Assist with care of plants in the Rain Forest exhibits; Conduct plant maintenance, fertilization, propagation, and transplantation; Assist in display development; Perform special projects as determined by the horticulture staff. **Requirements:** Must be enrolled in an accredited college, pursuing a degree in Biology, Ecology, Environmental Science, or a related field.

#### **Marine Animal Rescue Program (MARP) Intern**

**Responsibilities:** The selected candidate will aid in all aspects of marine animals rescue program (MARP) operations, which involves the rescue, rehabilitation, and release of stranded marine mammals and sea turtles and implementing outreach efforts of the Aquarium's Ocean Health Initiative. The selected candidate is also responsible for technical and clerical assistance for the Conservation Department staff as necessary. **Duties include:** Animal Care – participating in rescue and release trips, daily feeding, medical treatments, facility maintenance including cleaning and water changes, behavioral observations, and record keeping; Outreach – learning to interpret the MARP artifacts and conservation messages and participation in seasonal outreach and public education programs at the Aquarium and off site; Other duties as assigned – field work, etc. **Requirements:** Must be college junior or senior majoring in environmental science or related field with course work in biology and ecology. Summer and January terms require 40 hours per week of work for 4 weeks. Spring and fall terms require 8 hours per day, one day per week of work.

#### **Marine Mammal Trainer Intern**

**Responsibilities:** The selected candidate is responsible for providing support to the marine mammal training staff. This internship's primary purpose is to teach the intern training theory. *There is limited*

**hands-on animal contact during the internship. Duties will include:** Prepares daily animal diets and dispenses vitamins as instructed; Responsible for the cleanliness and safety of all animal back-up areas; Assists in training, husbandry, and medical sessions; Participates in pre-show and pre-session preparations; Periodically participates in sessions involving swimming during enrichment and play sessions – no animals involved; Other duties as assigned. **Requirements:** Must be college junior or senior majoring in life science or related field. Must have a basic understanding of marine mammal natural history. Must have good swimming skills. Must work well as a team member. Summer and January terms require 40 hours per week of work for 4 weeks. Spring and fall terms require 8 hours per day, one day per week of work.

#### Water Quality Lab Intern

**Responsibilities:** The selected candidate will assist in the water quality testing of all fish and mammal systems throughout the aquarium. Duties include testing water for salinity, pH, ammonia, nitrite, alkalinity, and copper according to lab procedures, and recording neat, accurate data. The selected candidate will work closely with the Lab Technicians and the Animal Husbandry staff. **Requirements:** Must be college junior or senior with general biology and chemistry work. Strong math skills and computer proficiency preferred. Must be available to work mornings.

**The Mauritian Wildlife Foundation Volunteers** - The Mauritian Wildlife Foundation (MWF) is a charitable conservation NGO based in Mauritius working hard to save the endemic fauna and flora of the Mascarenes (Mauritius, Rodrigues and surrounding islets). It is best known for its successes, through partnership with the Durrell Wildlife Conservation Trust's Jersey Zoo, in recovering the Mauritius kestrel from only four birds, the pink pigeon from only a dozen birds and, most recently, the echo parakeet from about 20 birds. Pigeon and parakeet work is intensive and ongoing and new projects are under development for endangered endemic songbirds and reptiles. MWF operates a team of up to 100 or more staff and volunteers working on bird, reptile and plant projects. The MWF is currently seeking new volunteers to work on the pigeon project immediately and other projects (passerines and echo parakeets) in September 2004. Volunteers are accepted for six month stays after which they may be asked to join the team for a longer period, according to requirements and performance. Volunteers are expected to finance their own travel, comprehensive insurance, (including repatriation), and living expenses while in Mauritius (the latter approx £150 per month) but receive free accommodation and access to basic office facilities including fax, telephone and Internet. Work on the pink pigeon project consists of supplementary feeding, predator control and monitoring, data collection on breeding and feeding behaviors of the pigeons and may include capture, handling and ringing experience, disease monitoring and control and radio-telemetry. Volunteers are based in basic, but adequate, field stations for five days each week and have the use of a communal residence during the weekends. Volunteers needed for echo parakeet and passerine breeding seasons (Sept through February) will be based either at our residential house near our captive breeding facility and will be largely involved with hand-rearing, captive management and potentially re-introductions, or at one of the field stations involved with nest monitoring, nest manipulation, release and monitoring of wild populations. Any applicant should be hard working, self-motivated and easy going. They must be able to live in isolated and sometimes claustrophobic conditions while maintaining good humor, tolerance of others and, above all, high standards of work. They must have no concerns about humane predator control and be physically and mentally fit and strong. The successful applicant will experience at first hand, a cutting-edge, conservation initiative, learning all the necessary skills and methods, aimed at saving some of the worlds rarest bird species from extinction. Applicants should send (preferably by email) a letter of application and full CV, including two (2) references, (with contact details including telephone and email) to: David Wills, Pink Pigeon Project Coordinator, Mauritian Wildlife Foundation, Grannum Road, Vacoas, Mauritius; Fax(230) 697 6512; [dwills@mwf.intnet.mu](mailto:dwills@mwf.intnet.mu)<

#### **SOS Rhino Seeks Volunteers**

SOS Rhino is looking for volunteers interested in helping us in our efforts to save the Sumatran rhinoceros. Our Borneo Team is studying the demographics of the remaining animals in Tabin Wildlife Reserve to determine when patrol units, habitat protection, or translocation may play a role in the rhinos' survival. Please visit SOS Rhino's web site for detailed information: <http://www.sosrhino.org/programs/volunteer.php> Or contact Cindy Salopek, Projects Associate/SOS Rhino via e-mail at: [cindy@sosrhino.org](mailto:cindy@sosrhino.org)<

More Zoo vacancies can be seen by visiting:

American Zoo and Aquarium Association - Job Listings  
<http://www.aza.org/JobListings/>

American Association of Zoo Keepers - Opportunity Knocks  
[http://www.aazk.org/aazknew/animalKeepersForum/opportunity\\_knocks.asp](http://www.aazk.org/aazknew/animalKeepersForum/opportunity_knocks.asp)

European Association of Zoos and Aquaria - Vacancies  
<http://www.eaza.net>

# AAZK Membership Application

check here if renewal [ ]

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**\$35.00 Associate**

*Those not connected with  
an animal facility*

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**\$125.00 or up  
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*Organizations/Institutions  
(requires Board approval)*

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**\$55.00 International**

*All members outside U.S. &  
Canada regardless of category*

## Canadian Members

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Full-time Keepers Only*

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*Other staff & volunteers*

**\$40.00 Associate**

*Those not connected with  
an animal facility*

**\$65.00 or up - Individuals  
Contributing/Canada**

**\$125.00 or up  
Institutional/Canada**

*Organizations/Institutions  
(requires Board approval)*

**Library Only**

**\$40.00 Library**

*Available only to public  
& university libraries*

Zoo Affiliation (if any) \_\_\_\_\_

Zoo Address \_\_\_\_\_

Title \_\_\_\_\_

Work Area \_\_\_\_\_

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Name on card \_\_\_\_\_ Expiration date \_\_\_\_\_

Signature \_\_\_\_\_

Mail this application to: AAZK Administrative Offices, 3601 S.W. 29th, Suite 133 Topeka, KS 66614-2054. Make checks/money orders payable to AAZK, Inc. Must be in U. S. FUNDS ONLY. Membership includes a subscription to *Animal Keepers' Forum*. The membership card is good for free admission to many zoos and aquariums in the U.S. and Canada.



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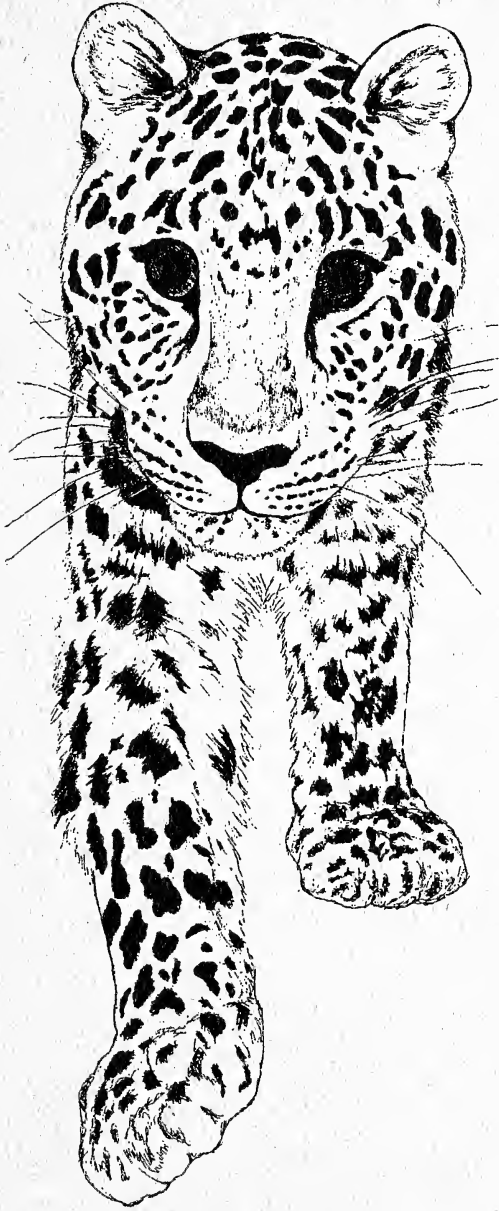


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30th Anniversary  
1974 - 2004

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# **ANIMAL KEEPERS' FORUM**



**The Journal of the American  
Association of Zoo Keepers, Inc.**

**SEPTEMBER 2004**

**Managing Editor:** Susan D. Chan • **Associate Editors:** Kayla Grams, Grand Junction, CO & Mark de Denus, Reid Park Zoo • **Enrichment Options Coordinators:** Dawn Neptune, Utah's Hogle Zoo & Rachel Cantrell, Disney's Animal Kingdom • **Legislative/Conservation Outlook Column Coordinator:** Georgann B. Johnston, Sacramento, CA. • **ABC's Column Coordinator:** Diana Guerrero, Big Bear Lake, CA • **Reactions Column Coordinator:** William K. Baker, Jr., Little Rock Zoo

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also serves as AAZK Liaison to the American Zoo & Aquarium Association (AZA)

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Chair/Coordinator International Assistance

Debbie Richmond, Roger Williams Park Zoo

Project M.A.R.C. (Making A Realistic Contribution)

### **AAZK PUBLICATIONS - CONTINUING DATA COLLECTION**

Biological Information (formerly Biological Values), 4th Edition - Jan Reed-Smith, Columbus Zoo

AAZK Enrichment Notebook 3rd Edition - Lee Houts, Folsom City Zoo

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30th Anniversary  
1974 - 2004

## About the Cover.....

This month's cover features *n* Amur leopard (*Panthera pardus orientalis*) drawn by Christine McKnight, a keeper at the Minnesota Zoo in Apple Valley, MN. The Minnesota Zoo currently has 1.1 unpaired Amur leopards. The Amur leopard, found in northern China and Korea, is one of several subspecies of leopard. Leopards are the most widespread members of the family Felidae, in part because of their adaptable hunting and feeding behaviors. Hunting alone, and usually at night, leopards rely on opportunity, stealth and speed. Prey is often dragged up into a tree to avoid loss to other predators or scavengers. This species is solitary by nature and will maintain a territory of 30 sq. miles. The main prey species of the Amur leopard are roe and sika deer along with hares and badgers. Leopards breed throughout the year with litters averaging three cubs, born after a 90-105-day gestation period. Cubs are kept hidden for about 6-8 weeks and then will begin to follow their mother. They will remain in her care until they are about 18 months old. Males weigh between 82-198lbs. (~37-90kg) with females weighing from 62-132lbs. (~28-60kg). The Amur leopard is listed as Endangered by the IUCN and is on CITES Appendix I protected species. The major threats to survival are depletion of prey species, loss of habitat and conflict with humans. Thanks, Christine!

Animal Keepers' Forum publishes original papers and news items of interest to the animal keeping profession. Non-members are welcome to submit articles for consideration. Articles should be typed or hand-printed and double-spaced. Authors are encouraged to submit their manuscripts on a disk as well as in hard copy form. Manuscripts submitted either on disk or electronically as attachments to an email should be submitted in Microsoft WORD. All illustrations, graphs, charts and tables should be clearly marked, in final form and should fit in a page size no greater than 5.5" x 8.5" (14cm x 22cm). Literature used should be cited in the text (Brown, 1986) and alphabetically in the final bibliography. Avoid footnotes. Include scientific name (as per ISIS) the first time an animal name is used. Thereafter use common name. Use metric system for weights and measurements (standard equivalents may be noted in parenthesis). Use the continental dating system (day-month-year). Times should be listed as per the 24-hour clock (0800, 1630 hrs. etc.). Glossy black and white or color prints (minimum size 3" x 5" [8cm x 14cm] ) are accepted. Clearly marked captions should accompany photos. Please list photo credit on back of photo. Photographs may be submitted electronically as either JPEG or TIFF file attachments.

Articles sent to Animal Keepers' Forum will be reviewed by the editorial staff for publication. Articles of a research or technical nature will be submitted to one or more of the zoo professionals who serve as referees for AKF. No commitment is made to the author, but an effort will be made to publish articles as soon as possible. Lengthy articles may be separated into monthly installments at the discretion of the editor. The editor reserves the right to edit material without consultation unless approval is requested in writing by the author. Materials submitted will not be returned unless accompanied by a stamped, self-addressed, appropriately-sized envelope. Telephone, fax or email contributions of late-breaking news or last-minute insertions are accepted as space allows. Phone 1-800-242-4519 (US); 1-800-468-1966 (Canada); FAX (785) 273-1980; email is akfeditor@zk.kscocmail.com<

**Deadline for each regular issue is the 10th of the preceding month.**

**Dedicated issues may have separate deadline dates and will be noted by the editor.**

Articles printed do not necessarily reflect the opinions of the AKF staff or the American Association of Zoo Keepers, Inc. Publication does not indicate endorsement by the Association.

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E-Mail Addresses: You may reach Barbara Manspeaker at AAZK Administrative Offices at: aazkoffice@zk.kscocmail.com< You may reach Susan Chan and Animal Keepers' Forum at: akfeditor@zk.kscocmail.com<

**AAZK Website Address: [www.aazk.org](http://www.aazk.org)**

**BFR Website: <http://bfr.aazk.org>**



# *Scoops & Scuttlebutt*



## **Small Travel Grants for Keepers Available**

Hopefully many of you are aware of the inaugural Avian Scientific Advisory Group Small Grants Program awards made late last fall to three very deserving bird keepers. The Small Grants Program is designed to encourage greater involvement by bird keepers and working supervisors in ASAG and its programs. This is done by funding travel to the AZA Regional Conference where the ASAG workshops are hosted. Grant recipients write and present a paper at the conference, meet and network with workshop attendees and become more familiar with ASAG, its goals and initiatives. Our first three grant recipients had a great time in Santa Barbara and presented three great papers. It is time to be thinking about submissions for this year's Small Grants Program. The pre-proposal deadline for submissions is **1 October 2004**. The pre-proposal submission includes an abstract (500 words or less) for the paper to be given, a completed application form and a completed letter of institutional support.

The next ASAG sponsored workshops will be held at the AZA Central Regional Conference in Kansas City, MO from March 9 - 12, 2005. The two workshop topics will be Penguin Husbandry and Avian Nutrition. Please note - the topics for papers submitted for the ASAG Small Grants are unrelated to the workshop topics. Your paper does not have to be about penguins or avian nutrition. Grant applicants must be paid employees of an AZA-accredited institution, working in a position that involves the care and management of captive birds. Persons holding the title Curator of Birds (or its equivalent) at an AZA-accredited institution are not eligible. Preferred paper topics are those which involve: taxa of current or future priority in the appropriate TAG regional collection plan; taxa for which innovation in breeding or captive management are needed; taxa of conservation priority in the wild; significant advancements in the welfare of captive zoo birds. Applicants will also be judged on their leadership potential, initiative and problem solving skills.

Please spread the word about this grant program to any and all avian staff within your organization. If you know of a deserving bird keeper or working bird supervisor who may be interested in this grant opportunity, please encourage them to apply. If you have any questions about the program please contact: Ken Reininger, Curator of Birds, North Carolina Zoo, ASAG Small Grants Program Coordinator - [Ken.Reininger@ncmail.net](mailto:Ken.Reininger@ncmail.net)

## **Grants Committee Seeks Members**

The AAZK Grants Committee needs a few new members – now is your chance to become involved! Please contact Jan Reed-Smith at [jrsotter@iserv.net](mailto:jrsotter@iserv.net) or 616-366-1033 if you are interested.

## **Gorilla Golf Challenge from OKC Chapter**

Time is running out! We hear this phrase attached to so many species and habitats throughout the world everyday and we, unfortunately, know that it is true. Sadly, it has become glaringly true for the gorilla species of the Congo. Years of civil war, human disease, and famine have taken a tremendous toll on gorilla populations and the threat continues as the numbers decline. In 2003 the AAZK-OKC Chapter was mobilized to take action to help the people in the Democratic Republic of Congo to save their beloved gorillas and protect their homeland. Thus the Gorilla Golf Tournament was created and in our first year we raised over \$4,000.00, which went directly to the Tayna Gorilla Reserve, a community-based reserve situated between the Maiko National and Virunga Volcanoes National Parks. This year AAZK-OKC would like to throw out a challenge to other AAZK Chapters to create their own Gorilla Golf event and help in this monumental effort by the local inhabitants of the Tayna Gorilla Reserve or to make donations to the Bushmeat Crisis Task Force to help stem the tide of extinction. If an event is not possible in your area we would like to invite Chapters to sponsor a gorilla golfer (\$80.00 per player) in our event to be held October 11, 2004. All proceeds go directly to gorilla conservation. If Chapters or individuals would like more information about the Tayna Gorilla Reserve, the AAZK-OKC Gorilla Golf Tournament, or receive an event registration packet please contact Debi Mangrum, [climbinchick007@aol.com](mailto:climbinchick007@aol.com), 405-425-0259, or Scott Darnold, [sdarnold@okczoo.com](mailto:sdarnold@okczoo.com), Oklahoma City Zoo and Botanical Garden 2101 NE 50<sup>th</sup> Street, Oklahoma City, Oklahoma 73120, or visit the Oklahoma City Zoo website at [www.okczoo.com](http://www.okczoo.com)

## News from Dallas

By the time you read this we will be just a few short weeks away from hosting your 31<sup>st</sup> National Conference. Hopefully your registration is in, your hotel and airline are booked and you will be attending. We had a fantastic number of abstracts submitted allowing us to bring you a diverse and exciting program.



Congratulations to Utah's Hogle Zoo Chapter, the winner of this year's Chapter Challenge. We would also like to extend a huge "Thank you" to all the Chapters that participated!

Please continue to check our web site [www.dallaszoo.com](http://www.dallaszoo.com) for the latest information on the program, airport transportation, pre- and post-conference trips and visit our chat room for roommate options. Don't forget to bring an auction item, shorts and shades! We look forward to seeing everyone soon!!!!

Dallas Chapter of AAZK

## Zoo Biology Group - A Great Resource for Zoo Professionals

Need assistance? You could try Zoo Biology, it is probably your best bet for zoo/animal information. Zoo Biology is the original discussion, question and answer group dealing with the diverse range of Zoo Sciences. First established in 1999 the Zoo Biology Group is concerned with all the disciplines involved in the running of a zoological garden - captive breeding, husbandry, cage design and construction, diets, enrichment, management, record keeping, etc. Hediger described zoo biology as "the science which embraced everything which was biologically relevant to the management of the zoological garden." This group is restricted to zoo professionals. It is specifically a forum for professional zoo staff. Exceptions may be considered in the case of students or allied professions. A genuine commitment to both *in-situ* and *ex-situ* conservation is absolutely essential. You are encouraged to copy answers to the group. The useful archive section increases each day. There are 1400+ Zoo Biology subscribers to date and 99% of subscribers have between five and 40 years of practical zoo experience in all areas. An immense combined expertise is waiting to share their knowledge. This group is moderated.

To Subscribe to Zoo Biology send an e-mail to: [zoo-biology-subscribe@yahoogroups.com](mailto:zoo-biology-subscribe@yahoogroups.com)< Leave the subject and message area blank

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To Unsubscribe from Zoo Biology send an e-mail to: [zoo-biology-unsubscribe@yahoogroups.com](mailto:zoo-biology-unsubscribe@yahoogroups.com) Leave the subject and message area blank.

## Just Published - Raptors Worldwide

Proceedings of the 6th World Conference on  
Birds of Prey and Owls  
May 2003, Budapest, Hungary  
ISBN 963-86418-1-9

Edited by R. D. Chancellor and B.- U. Meyburg  
Published jointly by WWGBP and MME  
(Birdlife Hungary) with numerous figures, maps,  
photographs and line drawings

This 890-page volume contains the Proceedings of the 6th World Conference on Birds of Prey & Owls held in May 2003 in Budapest, Hungary. Outstanding among the 81 refereed original papers in English (presented by over 150 authors from all over the world) is an extensive section on vultures. Severely threatened, if not already extinct in many parts of their former range, there are 12 papers on different Old and New World vulture species and their conservation together with eight special studies providing a comprehensive picture of the recent catastrophic decline of species in the genus *Gyps* in Southern Asia, particularly India and Pakistan. The hitherto inexplicable cause of this decline was first revealed during this conference.

Other sections are devoted, to such wide-ranging topics as Population Limitation, Taxonomy, Electrocutations, Raptor/Human Conflicts and Environmental Contaminants. Other special sections are devoted to Falcons and Eagles respectively, including accounts of the conservation work carried out in Hungary on such endangered species as the Saker Falcon and Imperial Eagle. Many other papers present the most up to date state of research and conservation of different diurnal and nocturnal raptors worldwide.

Prices and details of payment may be obtained from:

World Working Group  
on Birds of Prey and Owls (WWGBP),  
P.O. Box 52,  
Towcester NN12 7ZW,  
England,

Tel. & Fax: + 44-1604- 86 23 31,  
E-mail: [robin.chancellor@virgin.net](mailto:robin.chancellor@virgin.net)

## AAZK Announces New Members

### New Professional Members

Cortney Cote, **Squam Lakes Natural Science Center (NH)**; Lynne VonHaggin, **no zoo listed (Hoosick Falls, NY)**; Lucia Meeks, **Hollywood Animal Park (SC)**; Vada King, Jason Hutcherson, Mike Miller, Beebe Miller and Kaela Beecher, **Wild Animal Safari (GA)**; Kyle Mikals, **Jacksonville Zoo & Garden (FL)**; Shelley Earles, **Jackson Zoological Park Zoo (MS)**; Stephanie Poduska, **Cleveland Metroparks Zoo (OH)**; Melaina Wallace, **Chicago Zoological Society (IL)**; Carrie Osborne, **no zoo listed (St. Charles, MO)**; Jennifer Caiharr, **Kansas City Zoo (MO)**; Amanda Hansen, **Topeka Zoo (KS)**; Susan Russell, **no zoo listed (Salina, KS)**; Heather Genter, **Audubon Nature Center (LA)**; Will Kuhs, **Audubon Zoo (LA)**; Jose Luis Cortes, **Dallas Zoo (TX)**; Melissa McCartney, **Houston Zoo (TX)**; Kimberly Miller, **California Wolf Center (CA)**; Sara Kircher, **The Living Desert (CA)**; Keith Neitman, **no zoo listed (Everett, WA)**; Bruce Townsend, Heather Perry and Mike Moore, **Assiniboine Park Zoo (Winnipeg, Canada)**.

### Renewing Contributing Members

Steven M. Wing  
Louisville Zoo, Louisville, KY

David R. Morrow, President ZuPreem,  
Mission, KS

### Renewing Institutional Members

Catoctin Wildlife Preserve & Zoo  
Thurmont, MD

Arizona-Sonora Desert Museum  
Tucson, AZ



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# Coming Events

**Red Panda SSP Keeper Training Workshop 2004**  
10-12 September 2004 at Knoxville Zoological Gardens, Knoxville, TN. For more information contact: Jennifer Manrod, Conservation Biologist, Knoxville Zoological Gardens, Conservation and Science Dept., P.O. Box 6040, Knoxville, TN 37914; or you can e-mail at: [jmanrod@knoxville-zoo.org](mailto:jmanrod@knoxville-zoo.org); Phone: (865)637-5331 ext.389; Fax: (865)637-1943.

**Animal Training Workshop** - with Ken Ramirez, author of *Animal Training: Successful Animal Management Though Positive Reinforcement*. - 19-22 September 2004 at the Hyatt Regency Oakbrook, Illinois (just outside of Chicago). The workshop is open to animal care professionals who work in a zoo or aquarium as well as private animal owners. Topics will range from basic operant conditioning to advanced concepts such as problem solving and dealing with aggression. Complete information and registration form available online at [www.mytrainingstore.com](http://www.mytrainingstore.com)

**AZA Annual Conference** - 19-23 September, 2004 in New Orleans, LA. Hosted by Audubon Nature Institute. Info at [www.aza.org/ConfWork/#top](http://www.aza.org/ConfWork/#top) or email Beth Strelitz, AZA Meetings Manager at [bstrelitz@aza.org](mailto:bstrelitz@aza.org)

**The Aquarium and Zoo Facilities Association (AZFA)** - 26-29 September, 2004 in Oklahoma City, OK. Program/registration info: [users.rowan.edu/~suyd8758/](mailto:users.rowan.edu/~suyd8758/) or contact Ernie Wilson at [ewilson@okzoo.org](mailto:ewilson@okzoo.org), phone ((405) 425-0201 or fax (405) 45-0207.

**Zoological Registrars Association Annual Meeting** - 29 Sept. - 2 Oct. 2004 in Toronto, Ont., Canada. Info at ZRA website [www.zra.homestead.com](http://www.zra.homestead.com) as plans develop.

**2004 Fish Disease & Diagnostic Workshop** 1-2 October 2004. Sponsored by Ohio State University Veterinary Extension & the Laboratory for Wildlife & Environmental Health. Guest lectures from the zoo community include: Chris Bonar, VMD (Associate Veterinarian, Cleveland Metroparks Zoo) and Tim Mullican, DVM (Director of Newport Aquarium). To download registration materials, visit [http://www.jordanschaul.com/registration\\_information.htm](http://www.jordanschaul.com/registration_information.htm)

**25th Annual Elephant Managers Association Conference** - 14-17 October, 2004 in Tulsa, OK. Hosted by Tulsa Zoo and Living Museum. Pre- and post-trips scheduled to Dickerson Park Zoo and Riddle's Elephant and Wildlife Sanctuary (18 Oct.). For more info email: [karendunn@ci.tulsa.ok.us](mailto:karendunn@ci.tulsa.ok.us) or visit [www.elephantmanagers.com](http://www.elephantmanagers.com) and/or [www.tulsazoo.org](http://www.tulsazoo.org)

**International Marine Animal Trainers Association (IMATA)** - October 17-22, 2004 in Kolmarden, Sweden. For more information: <http://www.imata.org> or email Kirstin Anderson at: [imata2004@stofanet.dk](mailto:imata2004@stofanet.dk)

**6th Annual Association of Zoo and Aquarium Volunteer Administrators National Conference**

**(AZAVA)** - 7-10 November, 2004 in Galveston, TX. Hosted by Moody Gardens. For info contact Tim Raeke at [mgvolcoordinator@hotmail.com](mailto:mgvolcoordinator@hotmail.com) or phone (800) 582-4673 ext. 4106.

**Carnivores 2004: Expanding Partnerships in Carnivore Conservation** - 14-17 November 2004 in Santa Fe, NM. Put on by Defenders of Wildlife. For info see [www.carnivoreconference.org](http://www.carnivoreconference.org); or leave a message at (202) 789-2844 ext. 315.

**International Symposium on Construction and Maintenance in Zoos** - 21-24 November 2004 at Zoo Zürich, Zürich, Switzerland. Program, Additional Information, Hotel Recommendations, Registration Forms are available at <http://www.zoo.ch/symposium>

**International Elephant Research Symposium** - 3-5 December, 2004 in Fort Worth, TX. Presented by the International Elephant Foundation and the Fort Worth Zoo. This important symposium will concentrate on the research and conservation needs of captive and wild populations of elephants. Interested persons can also contact Tarren Wagener at [elephantsymposium@fortworthzoo.org](mailto:elephantsymposium@fortworthzoo.org) for additional information.

**6th International Aquarium Congress** - 5-10 December 2004 in Monterey, CA. Hosted by the Monterey Bay Aquarium. Additional information in English, French and Japanese is available online at <http://www.iacon2004.org>

**Fifth Zoos & Aquariums: Committing to Conservation** - 26-30 January 2005 in Cocoa Beach, FL. Hosted by the Brevard Zoo. This conference will continue to examine and promote the role of zoos and aquaria in supporting *in situ* field research and conservation. Will include keynote speakers, paper sessions, posters. Will be preceded by one-day workshop on North American Conservation Initiatives. For further information please contact Cheri Purnell at (321) 254-9453 ext. 25 or email her at [membership@brevardzoo.org](mailto:membership@brevardzoo.org)

**Fourth Sea Otter Conservation Workshop** - 18-20 March 2005 hosted by Seattle Aquarium, Seattle, WA. Three days of papers, reports and discussion about all aspects of sea otter biology and conservation. Anyone working with sea otters in any capacity is invited to come. Pre-registration is required; discount for early registration (deadline **18 Feb. 2005**). Pre-registration until **11 March 2005**. Info, registration and/or questions contact Dr. Shawn Larson at [shawn.larson@seattle.gov](mailto:shawn.larson@seattle.gov)

**The 7th International Conference on Environmental Enrichment** - to be held in August 2005 in New York City, NY, USA. The conference is hosted by the Wildlife Conservation Society (WCS). Watch this page for details as they become available.

Post Your Coming Event Here - email to:  
[akfeditor@zk.kscoxmail.com](mailto:akfeditor@zk.kscoxmail.com)

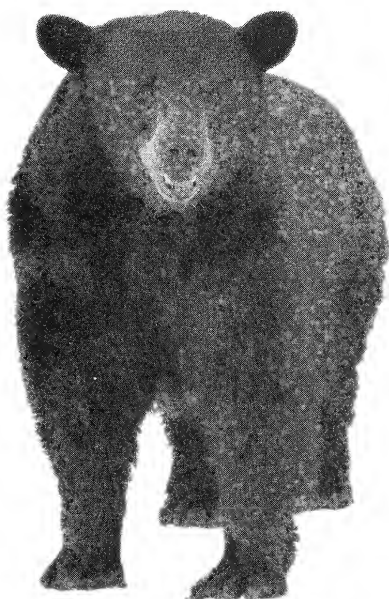
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# REACTIONS

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## *A Question and Answer Forum for the Zoo Professional on Crisis Management*

*By William K. Baker, Jr., Curator  
Little Rock Zoo, Little Rock, AR*

### **Question**

What resources and research is currently available regarding carnivore enclosures and exhibit fabrication?

### *Comments*

There is a wide range of zoological resources available in regards to exhibit design for carnivores. While some are available in hard copy, most are best accessed through either CD ROM disks or via the Internet. While this is by no means a complete list, it does provide some excellent resources for a professional to use during the conceptual portion of the design process.

*American Association of Zoo Keepers, Inc.*

AAZK has a number of good resources that could prove invaluable during the design phase of exhibits.

### **Biological Information on Selected Mammals 4th Edition CD-ROM Version**

A product of the American Association of Zoo Keepers, Inc.

The 1,396-page Biological Information on Selected Mammal Species CD covers a wide range from general, breeding, and young-rearing behavior to diet and physical descriptions of 590 species. The volume is in a PDF format allowing searches by Species (Common or Latin name); or Key words using the Find function; or by Species (Common or Latin name), Family; or Order using the Bookmarks. Table of Contents are given for Orders, Families, Species by Common Name, Species by Scientific Name, and Species by Order and Family. The Appendices cover a variety of information from behavioral patterns common to families (Bovid displays) to taxonomy (Primates). References are listed by Order and Family.

AAZK Member: \$25.00      Non-member: \$40.00

### **AAZK Enrichment Notebook, Third Edition CDROM Version**

A product of the American Association of Zoo Keepers, Inc.

This 455-page publication includes many facets of animal enrichment and is indexed for easy reference. The sections include an Overview of Enrichment, Enrichment Links, Enrichment Suppliers,

Suggested Guidelines (Bats, Bears, Birds, Carnivores, Fishes, Primates, Reptiles, and Ungulates), Safety Considerations, Lists of Browse Plants and Toxic Plants, Cookbook Recipes for Enrichment, Enrichment Ideas/Devices (organized by category), Sample Enrichment Forms currently used in zoological facilities, and an extensive Enrichment Bibliography. This is a searchable PDF format document utilizing Acrobat Reader that is included

AAZK Member: \$25.00      Non-member: \$40.00

Both CDs available from: AAZK, Inc., 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054 USA  
ATTN: CD Order. Phone orders using a MasterCard or VISA credit card may be placed by calling 1-800-242-4519 (U.S.) or 1-800-468-1966 (Canada)

### *American Zoo and Aquarium Association*

In the AZA on-line Resource Center located in the Members Only Section of the website are numerous reference documents regarding Exhibit Design and Husbandry issues. Conservation and Science programs such as Species Survival Plan® programs, Population Management Plans, and Taxon Advisory Groups, all oversee the development of husbandry manuals. The [AZA Manual Husbandry page](#) has links to online husbandry manuals as well as contact information for those manuals not yet available online.

The [AZA Guide to Accreditation of Zoological Parks and Aquariums](#) (in PDF) addresses many husbandry-related issues, including the sections on the Animal Collection, Veterinary Care, and Quarantine Procedures.

The spatial and care requirements for over 40 animal groups, developed by the AZA Mammal Standards Task Force, (Also available in hard copy).

### *Internet*

ZooLex Zoo Design Organization: The ZooLex Zoo Design Organization runs the ZooLex website. The ZooLex Zoo Design Organization is a non-profit organization independent from companies and organizations. It relies on the support of subscribers, members, sponsors and well-wishers to fund its activities. The ZooLex Zoo Design Organization was established to help improve holding conditions for wild animals in captivity by publishing and disseminating information related to zoo design, by promoting appropriate holding conditions for wild animals in captivity, providing balanced technical information and advice about zoo design, and supporting research and vocational training related to zoo design.

ZooLex Zoo Design Organization  
Phone/Fax: 0043-1-3101060  
Email: [zoolex@zoolex.org](mailto:zoolex@zoolex.org)  
Sobieskigasse 9/12  
A-1090 Vienna, Austria

Website: [www.zoolex.org](http://www.zoolex.org)

### *Felid Taxon Advisory Group (AZA) website*

This is an extensive website that carries up to date information as it relates to captive felid management issues. Some examples include: Husbandry Manual, Zoo Standards for Keeping Large Felids In Captivity Zoo Standards for Keeping Small Felids In Captivity, **Cat Projects**, Web Links, and **Fact Sheets**.

Website: [www.felidtag.org](http://www.felidtag.org)

### *Hardcopy*

Two scientific papers come readily to mind that really are solid resources:

The Process of Exhibit Design and Construction: How it Affects Crisis Management., by Ken Kaemmerer, Curator of Mammals, Dallas Zoo.

Houston Zoo Cat Facility Safety Review: A New Era in Animal Containment Design., by David Ruhter, Curator of Mammals, Houston Zoo.

Presently: General Curator at the Mesker Park Zoo.

These papers are also available in AAZK's Resources for Crisis Management in Zoos and Other Animal Care Facilities, if you can find a copy of this book. It is currently out of print.

And one really great book:

Wild Mammals in Captivity: Principles and Techniques, Devra G. Kleiman (Editor), Mary E. Allen, Katerina Thompson, Susan Lumpkin, Katerina V. Thompson (Editor)

ISBN: 0226440036, Publisher: University of Chicago Press, May 1997.

The first modern handbook of its kind, focuses on new approaches to the management of wild mammals in captivity. In one comprehensive volume, the editors have gathered the most current information from field and captive studies of animal behavior, advances in captive breeding, research in physiology, genetics, and nutrition, and new thinking in animal management and welfare. Featuring contributions from dozens of internationally renowned experts, this book is a professional reference of immense practical value, surveying every significant scientific, technical, and management issue. Organized into seven parts, the forty-eight chapters and five appendixes cover the basics of husbandry and nutrition; the design, planning, and management of exhibits in zoos and wildlife parks; behavior, reproduction, and breeding; genetics and population management; and research with captive mammals

**Next Month:** We have been having problems transporting ammunition during training exercises, do you have any suggestions?

**If you would like to submit a question for this column or have comments on previously published materials, please send them to AAZK, Inc., 3601 S.W. 29th St., Suite 133, Topeka, KS 66614 Attn: Reactions/AKF**

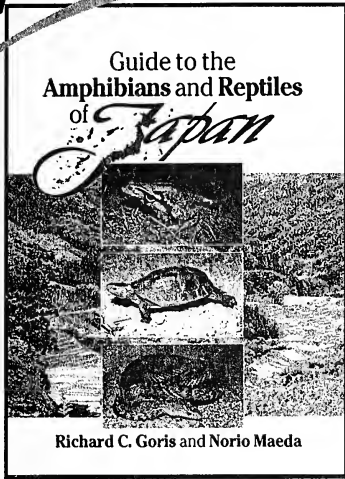
(About the Author: Since 1985 Bill has been active in the fields of science, zoology, and wildlife management. His education and experience include a B.S. in wildlife management and post-graduate studies in zoology, Lab and Museum Assistant, Shoot Team Leader, ERT Member, Large Mammal Keeper, Senior Keeper, and Zoo Curator at various zoological facilities. His area of research is crisis management in zoological institutions, which draws upon practical experience and training as a Rescue Diver, Hunter Safety Instructor, NRA Firearms Instructor, and Red Cross CPR/First Aid Instructor.)

### *If You're Moving.....*

**Make sure to notify AAZK National of your change of address. Don't miss a single AKF issue! Call: 1-800-242-4519 (US) or 1-800-468-1966 (Canada) or email: [aazkoffice@zk.kscoxmail.com](mailto:aazkoffice@zk.kscoxmail.com)<**



# New Titles



## Guide to the Amphibians and Reptiles of Japan

by *Richard C. Goris & Norio Maeda*  
Orig. Ed. 2004 ISBN 1-57524-085-8 \$69.50

*Guide to the Amphibians and Reptiles of Japan* covers all the herpetologically significant islands of the Japanese archipelago. Written for both amateur and professional herpetologists, it lists and describes all known species, giving the currently accepted scientific name, Japanese name, meaning of Japanese name, description for identification, range, and ways of distinguishing similar species. All but 9 of the 147 species are illustrated

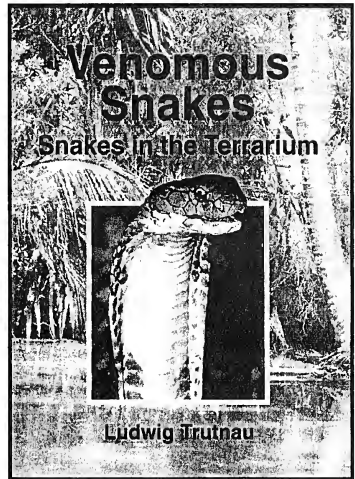
with 135 color photographs suitable for identification, and range maps for all species are included. The annotated bibliography includes the few treatises in English and the major books in Japanese containing understandable illustrations.

## VENOMOUS SNAKES: Snakes in the Terrarium

by *Ludwig Trutnau*

Translated by Donald W. Stremme, VMD  
4th German Edition 1998, English Ed. 2004  
ISBN 1-57524-138-2 \$74.50

Finally available in English, this completely revised and expanded edition contains full descriptions of 171 different species and utilizes 126 color pictures. The behavior and care in captivity of venomous snakes from the families Elapidae (cobras, kraits, and coral snakes), Viperidae (adders and vipers), and Crotalidae (pitvipers), are comprehensively discussed. Subspecies and color variations are carefully detailed. It is an essential reference for all veterinary clinics; zookeepers; and herpetoculturists.



To place your order and obtain shipping costs call 1-800-724-0025 or e-mail us at:  
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# *Have you weighed your kangaroo today?*

## *Kangaroo Training at Disney's Animal Kingdom*

*By Andrea Ball-Morawa, Animal Keeper  
Disney's Animal Kingdom, Lake Buena Vista, FL*

### **Introduction**

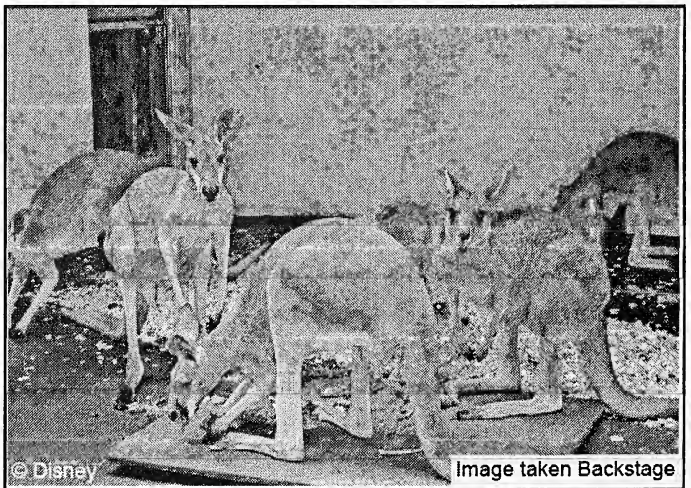
During the summer of 2003 at Disney's Animal Kingdom (DAK) Tree of Life exhibit, 3.2 red kangaroos (*Macropus rufus*) and 0.2 northern great grey kangaroos (*Macropus giganteus giganteus*) were held off-exhibit due to a six-week renovation. During this time period, the animals had access to their stalls and a runway (long corridor leading to exhibit). The kangaroo training team decided to utilize this rare opportunity to target and scale train all seven kangaroos—both as a form of enrichment and as a goal to record accurate weights. The animals were trained through operant conditioning in a group setting, rather than individually.

### **General History**

The Tree of Life at DAK currently houses 3.2 red kangaroos and 0.2 northern great grey kangaroos. These animals are housed nightly in a stall adjacent to 0.5 axis deer (*Cervus axis axis*), and are on exhibit daily with 0.5 axis deer, 2.0 European white storks (*Ciconia ciconia*), 1.1 West African crowned cranes (*Balearica pavonina*), and 1.1 Indian green peafowl (*Pavo muticus*). The kangaroos were trained to shift into a holding stall each night using a tambourine as an auditory cue. Once in the stall, a trainer spends 5 to 15 minutes offering primary reinforcement to actively desensitize the group towards the keepers. Overall, the group was well acclimated to the keepers, with the exception of two animals: 0.1 red kangaroo, named "Racer," and 0.1 northern great grey kangaroo, named "Emily." Both of these animals tended to exhibit a flight response to the keepers and have had less voluntary contact with the keepers than the other animals. The opposite of these two animals was 0.1 northern great grey kangaroo, named "Krinkles," that was hand-reared and tended to be very focused on the keepers.

### **Training Area and Equipment**

The training area utilized was an 18 x 22-foot (5.5m x 6.7m) stall and the connecting runway to the animals' exhibit. A 48 x 32-inch (~122cm x 81 cm) wooden platform was constructed to fit over a platform scale in order to allow a larger station area for the kangaroos' body size and tails. A blue and white buoy was attached to a dowel rod for a target. A dog whistle was introduced and utilized as a conditioned reinforcer, or bridge. A whistle gave the keepers the ability to have both hands free for training. Primary reinforcement was fruit and greens from the animals' diet, as well as high-fiber sticks, fiber biscuits, and apple leafeater biscuits (made by Mazuri®).



**Kangaroo group training on scale.**

A typical training session lasted 5 to 15 minutes, during which time an animal was asked to perform a certain behavior two to three times according to that particular animal's response to the session. In the early stages of training, a plus or minus was used to rate a session. This allowed the trainer the ability to note the progression or regression of the training session. As the behavior developed, a rating scale was established to rate each session. The following is the rating scale that is currently being utilized.

- 5 - Animal targets onto scale platform, with whole body on the scale platform
- 4 - Animal targets onto scale platform, but does not put tail onto the platform
- 3 - Animal will target, but will only put one foot on the scale platform
- 2 - Animal will target over or near the scale, but will not get onto the scale
- 1 - Animal does not target

### **Training the Behaviors**

During the six-week training period, 3.2 red kangaroos and 0.2 northern great grey kangaroos shared the exhibit runway with 0.5 axis deer. The axis deer training team was also conditioning for a scale behavior during the same timeframe, so both groups of animals experienced the introduction to the scale platform in the identical manner.

For the first week, two wooden platforms were brought into the runway each day and the animals received all of their greens on the platform. During this week, the animals were also introduced to the target and reinforced each time they approached the target and/or touched the target. The behavioral criterion for reinforcement was to touch the target with their nose and to hold for the bridge. To maximize consistency, one training team member assumed the responsibility of training this behavior with all seven animals.

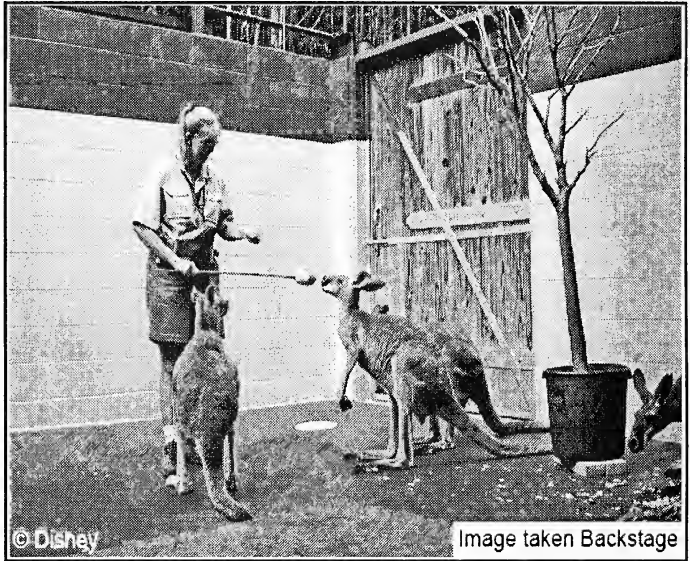
After the animals became comfortable eating greens off the platform, the next approximations were put into place. Several challenges occurred once the training sessions began to take place inside the kangaroo holding stall. An attempt was made to train the animals individually, but whenever the animals were separated from each other, they showed obvious signs of distress, e.g., stomping their feet hard against the stall floor, continually hopping around the stall, or waiting at the stall door. With the notable exception of one animal, all of the others exhibited very little focus and would not participate in the training sessions whenever they were separated from the rest of the group. The training team then decided to work the animals in a group training session.

The group training session took place immediately after the animals shifted into their holding stall at night. The holding stall was set-up with the scale platform and greens as positive reinforcement for shifting into the stall. As stated previously, all of the kangaroos were trained to shift into the stall at the end of the day after hearing a tambourine cue. Once in the stall, they were given a brief period to eat the greens on the scale platform and to adjust to their surroundings. The trainer then entered the stall wearing a "fanny pack" with the training diet, the target and bridge. Often, there were ambient noises outside the stall originating from other keepers working in the area. Therefore, the trainer believed there was no need to be completely quiet in the stall. The trainer often talked to the animals in the stall so that the group would become habituated to voices and various other noises.

The kangaroos were trained to target by moving in small approximations toward the target. The following is an example of the training steps and progression that occurred with these animals: First, the target was placed a few inches away from the kangaroo. As soon as the kangaroo reached out to smell the target, it received a whistle bridge and a biscuit. The next step was to touch the target with its nose in order to hear the bridge and receive a biscuit. Next, the target was moved away and the kangaroo had to move towards the target and touch the target to receive a biscuit.

Once they were moving and coming to the target, then the next step was to move the target near the scale. If they seemed comfortable moving toward the scale and would target near the scale, then the trainer moved the target directly over the center of the scale. At this point, the animal was stepping up onto the scale to touch the target to receive food. The final step was to hold the target to where the kangaroo's whole body was on the scale while it was touching the target with their nose and receiving a reward. By using the target to get them onto the scale, it was easy to target them off the scale as well. Within six weeks, 3.1 red kangaroos and 0.1 northern great grey kangaroo were all targeting consistently, and 3.0 red kangaroos and 0.1 northern great grey kangaroos were consistently moving onto the scale platform.

During the initial stages of training the group, it was noted that 0.1 red kangaroo, "Racer," and 0.1 northern great grey kangaroo, "Emily," both appeared nervous around the trainer and the target. Each time these animals were approached by the trainer, they quickly left the area. The trainer chose to ignore this behavior and focused on training the rest of the group. During one training session, however, something unexpected occurred while the trainer was targeting several kangaroos over the scale platform: "Emily," walked into the group, appeared to



**Kangaroos target training.**

observe what 3.0 red kangaroos were doing and then proceeded to touch the target with her nose. As soon as she received a bridge, she left the target and went over to the wall. The trainer then spent time with "Emily," reconditioning the bridge secondary reinforcer. The next several sessions were spent conditioning the bridge and building a relationship with "Emily" to the point where she would take food from the trainer's hand. There were several occurrences when it appeared that "Emily" would observe the other kangaroos and then touch the target. After a week, she began to stay for reinforcement and, subsequently, she stepped onto the scale platform, where she immediately received a "jackpot" reinforcement (this is a positive reinforcer that is much larger than usual, and usually unexpected). Since very few sessions had been worked with "Emily" or "Racer" due to their hesitant nature around the trainer, it was extremely exciting to witness what appeared to be "Emily's" observational learning as it took place among the group.

"Racer," the other skittish animal, consistently refused to take food from the trainer's hand. However, since appearing to observe the rest of the group, she has started to move toward the target and touch the target. For this individual animal, primary reinforcement is placed at her feet. "Racer" is becoming more confident and now moves toward the scale platform to touch the target, where she waits to receive food at her feet.

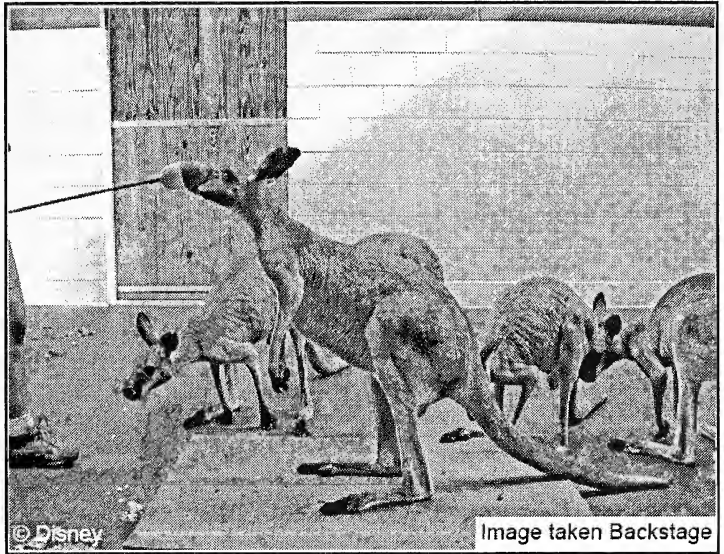
On the opposite side of the training spectrum, there are two animals that are so confident in touching the target and moving onto the scale that they tend to dominate the training session. In fact, they moved so quickly onto the scale that they did not allow another kangaroo the opportunity to step-up. One very aggressive member of the group, 0.1 northern great grey kangaroo, "Krinkles," has

actually been observed “boxing” at the other animals when they get too close to her or to the trainer during the session. Initially, when “Krinkles” began to display this type of adverse behavior, the trainer immediately left the stall, giving the group and more importantly, “Krinkles” a time-out. However, upon returning to the stall, “Krinkles” was waiting at the stall door and once again, began to dominate the training session. To be proactive, a second trainer was brought into the stall and began to train “Krinkles.” The thought was that by training an incompatible behavior, like a pouch check, “Krinkles” could no longer dominate the session.

### Conclusion

During the six weeks these animals were held in their stalls and runway, they made significant progress individually targeting in a group setting, as well as targeting onto a wooden scale platform. Individual weights were recorded

for all seven animals by the end of the six-week training period. Once reintroduced to their regular exhibit, some regression was noted. By relaxing the criteria for reinforcement and by shortening the approximations, these animals were all back on the scale within a two-week timeframe. Now that these behaviors have been trained and are in a maintenance phase, the next steps with these animals will be to begin separation training. This group of kangaroos has



**Kangaroos targeting onto scales.**

become increasingly confident in their training sessions, and now several members of the group try to dominate a session. Several kangaroos also now approach the trainers and attempt to take food directly from the fanny pack attached to the trainer. By training the animals to separate, it will increase safety for the trainers and the animals. Hopefully, it will also make the training session more effective. After separation training, the goal is to incorporate the other members of the training team into the animals’ training session. This particular group of kangaroos is being offered the opportunity to train four sessions per week on target and scale. This appears to be an acceptable amount of training sessions to maintain this behavior for this group of kangaroos. The kangaroo training team is in the process of training two different husbandry behaviors. One trainer is focusing on syringe training and the other trainer is focusing on jaw palpitation training. This allows the team members to physically check under each animal’s jaw for the potential problem of lumpy jaw. We feel confident as a training team that we will have continued success in training these new behaviors as we have had with training target and scale behaviors. After witnessing the increased confidence levels of these animals, we feel that “the sky’s the limit” with their ability to learn new behaviors. We are very excited to see where we can go from here!

### Acknowledgements

I would like to thank the other two kangaroo training team members, Tricia Emrich and Jill Magee for all their support and hard work. I would also like to thank Zoological Manager Sue Maher for her support with this training project, as well as the Curator of Behavioral Husbandry Chris Breder. A huge thank you to all the past and current team members at the Tree of Life, who spent countless hours sitting with the kangaroos in their stall so that the animals would become comfortable with the keepers.

# Now Available - New AAZK Logo Pins & Patches



shown actual size



enlarged to show detail

The new AAZK logo design (by Amy Burgess of Disney's Animal Kingdom) is now featured on both a patch and enameled pin. The colors are tan, rust, burgundy, grey, blue with a black border. Patches (4" x 3") cost \$8.00 each. The pins (3/4") cost \$6.00 each. Prices include domestic and Canadian shipping. This price covers postage for one pin or one patch to overseas addresses. For overseas orders of from 2-6 patches or pins, you **must** add \$2.00 additional for shipping.

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# *Training Terminology—Part 7*

## *Desensitization, Habituation, Generalization and Superstitious Behavior*

*Animal Behavior Management Committee*

*By Angela Binney, Committee Member  
& Animal Keeper, Disney's Animal Kingdom*

In this issue of our series about animal training terminology, we will talk about desensitization vs. habituation as well as generalization and superstitious behavior.

***Desensitization*** –*The act of pairing a negative, or aversive event, with a positive reinforcer until the event loses its aversive quality. The resulting behavior can be maintained through the use of positive reinforcement.*

This term is often confused with the word ‘habituation’ in conversations about ways to get an animal used to either a new action or a new environment. However, they have differing meanings and applications. Desensitization is frequently used when conditioning animals to voluntarily cooperate in medical procedures or exams. For instance, desensitizing an animal to the sight and feel of a needle is often achieved by pairing the (potentially) negative experience with presentation of a favorite food item. Repeated exposure to this pairing, as well as the use of a conditioned reinforcer, will often lessen any reaction by the animal to the needle (some animals will be more sensitive than others to needles). Desensitization works best if it is done using successive approximations (defined in Training Terminology Part 2), working incrementally toward the goal.

***Habituation*** – *The declining or waning of a behavior as the result of repeated presentation of the stimuli that initially caused the behavior; the process of gradually getting an animal used to a situation that it normally reacts to, (i.e.: avoids or reacts adversely to) by prolonged or repeated exposure to that situation.*

An example of habituation often seen in zoos is the train ride. An animal may show a fear response, or curiosity, to the zoo’s new train ride as it passes by the exhibit for the first time. However, after the train has driven by multiple times per day, day after day...eventually the animal may show no perceivable behavioral response. The behavior an animal exhibits when introduced to a new area, new item, or new routine also illustrates this concept (be it fear, curiosity, marking, etc.). After being exposed to this new ‘thing’ over time, the animal tends to become more comfortable and these behaviors start to fade.



**Generalization** – *The lack of discrimination between two stimuli. An animal that has been conditioned to respond to a specific stimulus may offer the same response in the presence of a similar stimulus.*

An intentionally conditioned stimulus (the ‘cue’) should be distinct. If a word or action sounds or looks similar to another, the animal may ‘generalize’ and offer the same behavioral response to both cues. For instance, the word ‘over’ sounds similar to ‘open’. If an animal is unable to differentiate between these two stimuli, it may be confused and offer the ‘over’ behavior when asked to perform ‘open’ or visa versa. This may also be encountered when working with recorded or instrument audio cues, as many bells and whistles sound similar in frequency and pitch. Some species or individuals may be able to differentiate between sounds or signals more easily than others. When selecting cues or stimuli, it is a good idea to consider the natural history of the animal with respect to senses. If the primary sense is vision, a visual cue might be more easily interpreted than an audio cue. Likewise, if the animal has poor vision, an audio cue may be more appropriate. Consideration of all of these factors when choosing stimuli can decrease the chance of generalization occurring.

**Superstitious behavior** – *A behavior that the animal offers during the training of another behavior but is unrelated to the behavior being trained. Because the unrelated behavior is inadvertently reinforced with the desired behavior, the animal perceives it as a necessary component of the behavior being trained and therefore necessary to receive reinforcement.*

A superstitious behavior can be learned quickly or over time, depending on how often and to what magnitude it has been reinforced. This happens, usually by mistake, when a trainer reinforces a behavior that is not part of, or related to, a behavior that the trainer is trying to condition. Because the unrelated behavior is inadvertently reinforced with the desired behavior, the animal perceives it as a necessary component of the behavior being trained and therefore necessary to receive reinforcement. For instance, a trainer is trying to capture the urination behavior to assist with sample collection. The animal happens to vocalize at the same time it is urinating, and the trainer bridges and pays a big ‘Jack Pot’ to the animal. The next time the trainer is training the urination behavior, the animal may assume that the vocalization was part of the behavior that was reinforced and may very well offer that same vocalization. If the vocalization is reinforced repeatedly in conjunction with the urination behavior, it may offer this behavior every time the cue for urine is given.

This is a column entry for the Animal Behavior Management Committee (ABMC). Visit [aazk.org](http://aazk.org) and browse the committee pages for additional information about training and the ABMC.

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## North American Elephant Management: Proven Alternatives

By Gregory C. McKinney  
Independent AAZK Member  
Warrington, PA

It has all the drama and intrigue of what promises to be a heated and compelling battle. The opponents, not yet removing both gloves, attack one another politely while defending their own positions. Old arguments resurface to support each side's claims. Proponents of change take advantage of the issue's popularity to strike while the iron is hot while supporters of the *status quo* reiterate recent success and future plans.

But this is not a political election or partisan legislative endeavor that I write of; it is the current state of affairs regarding elephant management in North America. Following a successful, but strongly opposed AZA-supported effort to import eleven African elephants into the United States, two zoo administrations have recently decided to discontinue elephant exhibition. These issues may not be directly related, but both have generated interest and dissension. The decision to discontinue elephant exhibition is not unprecedented nor is it the issue of controversy; rather it is the destination for the outgoing elephants that is causing the most recent rumblings from both within and outside of the zoo community.

The Detroit and San Francisco Zoos have decided to attempt to place their departing elephants in one of the two existing multi-acreage sanctuaries set up solely or partly to be concerned with elephant care: The Elephant Sanctuary in Tennessee, or the Performing Animal Welfare Society in California. In one case this decision was made against AZA recommendation and despite threats of action which could include loss of accreditation status. But given what is known and what has been put forward so well by those who support the Detroit/San Francisco judgments, perhaps the question should not be how can they do this but rather how can others NOT do the same? How can some choose to quietly and/or anonymously praise this decision but not support it by following suit, demanding and initiating change, or, at the very least, protesting and condemning the AZA pressure and threats of retaliation? How can any be in opposition to this action given the alternative? What is the value for the continued exhibition of these elephants in the traditional zoo setting?

One of the major reasons put forward to support the continued exhibition of elephants and other species in traditional zoological exhibits is that the animals work as ambassadors for their wild cousins. But do people really gain an appreciation for a species and its ecosystem through their familiarity with its caged or captive relative? Especially one that is kept in an environment and setting so far removed from its wild counterpart as to make comparisons of little practical value? And if people really do gain an appreciation for the wild animal and its natural world, how does this appreciation get transferred?

Many who support the continued presence of the elephant ride in zoos and elsewhere make the claim that the physical contact creates a personal connection that cannot be captured by merely viewing the animal. While it might be true that people who take a ride on an elephant spend, on average, more time in the presence of the animal than they would by only observing it on exhibit (especially if the time spent waiting in line is included in the statistic), does this necessarily translate into appreciation? Without any further input what is the average zoo visitor to take away from this interaction? While it is certainly possible that there are individuals who have been forever changed by the contact that they have had from riding atop an elephant, many of the world's greatest defenders of elephants have themselves never ridden one. So there must be other ways to bring this appreciation to light.

If the ride or the exhibition of elephants, most often displayed in unnaturally small family groups and in inadequate undersized enclosures, is accompanied by graphics, lectures, or other educational tools describing the wild elephant and its natural world, does the one necessitate or even positively reflect upon the other? Might it actually do more harm than good by being so blatantly incongruous? Perhaps the absence of a once familiar animal from a zoo would carry more import than its continued presence.

Will the public condemn an institution that removes its elephants from exhibit? Happily, comments from the public regarding the Detroit Zoo's decision are certainly optimistic. It would seem that many within the zoo underestimate their public's appreciation of the animals that they come to view. Though it is not clear where this appreciation was fully developed—studies have shown that the average zoo visitor is not really engaged in a very meaningful way regarding education and conservation—I'd like to think that the zoo is at least partly responsible. Truly, this is a cause for celebration. The keepers and the elephants, both acting as ambassadors, have apparently done their jobs well.

The suggestion that elephants will suffer a loss of popularity and become forgotten species should they no longer be on display in major zoos is unlikely. The giant panda remains one of the world's most popular animals while its presence in captivity is certainly not widespread. But to ensure that the elephant and its life remain in the public eye, the creation of large-scale reserves, by the zoo community, for the existing captive populations—reserves that would provide more naturally for the animals and establish an environment more appropriate to their well-being—should be a priority and their funding and management should be a responsibility shared by all. Likewise, all should benefit from their existence.

There are some who will say there is a risk that the decision to remove elephants from the traditional zoo setting would lead to still other species becoming "poster children" for change. But, with the exception of many of the animals currently kept in marine mammal parks, this is not likely to become a general issue. There are certainly exhibits contained in any zoo whose inhabitants could profit from an upgrade, but not in the universal sense like that of the elephant, dolphin, and whale. Even the best elephant exhibits could still benefit from change.

With the creation of large-scale, climatically-appropriate sanctuaries, acreage could be increased exponentially. Routine chaining, picket lines, and night-time/inclement weather stalling could be eliminated. Small groups could be combined to become families, clans and "kin"-groups. Research could be more conducive to studies that would benefit the wild populations. Portrayals of the natural life could be more accurate building to a greater appreciation by the public. Health problems directly related to the frustration of an uninspiring environment or an inappropriate climate could be avoided and stereotypes reversed. Space currently devoted to elephants could be given over to species that would more greatly benefit in the zoo setting. Finances and effort currently used or earmarked for exhibit modification and maintenance could be redirected. Housing both sexes, reliance on costly artificial insemination to perpetuate the rapidly declining populations could be lessened and possibly made obsolete. Emphasis on training to provide for what is lacking in the environment and for staff safety could be significantly reduced.

While there have certainly been some very worthwhile changes to existing facilities and management programs, there can be no denial that elephant management remains a convoluted challenge. Rather than upgrade minimum requirements of care every few years when it becomes convenient or economically feasible, ensuring that the worst exhibits fall within the acceptable range; rather than continuing to make insignificant changes to existing inadequate facilities and contributing resources to inconsequential efforts; rather than putting off for the future something that is necessary and overdue, why not begin today to address the real issues which face the African and Asian elephants in captivity? Instead of concentrating on *alternatives* to insufficiently and incompletely provide

what is lacking in the elephant's environment, why not provide what is lacking in the elephant's environment? Using the existing North American sanctuaries as well as the *in situ* national parks as a guide, the challenge of creating large-scale habitats for the existing captive populations of elephants should begin today. All the questions that will surface about the specifics of their operation should be asked while they are being developed.

Despite indifference and an almost complete lack of support from the elephant community, the existing "retirement" sanctuaries are a success. Despite the number of greatly dedicated professionals currently working in elephant management, the expert veterinary care, the high-quality diet, and the lack of environmental pressures, zoo-kept elephants have an average lifespan that falls well below that of those living wild or "semi-wild" in *in situ* national parks. Captive breeding is rare and calf mortality rates are high. Group compositions are small and available space in zoological institutions is limited. Some will say that these issues are being addressed. But if so, it will take decades to prove that this is the case and it would be a great tragedy if we were to find that we did too little, too late. Even if in 30 or 40 years hence the lifespan and mortality rates of the captives are found to be more in sync with the *in situ* cousins, there is still the debatable issue of quality of life. Perhaps the only real fear with the creation of reserves by the zoo community is that their success could have the public rallying behind the relocation of elephants faster than they could be accepted. In the worst possible scenario with the creation of reserves, zoos would have their own "retiring" sanctuaries and would be better able to provide for the chosen few.

Given the status of the North American captive elephant populations, it should really come as no surprise that some zoo administrators will rise above their peers and place their charges elsewhere. It is an action worthy of the highest admiration that some, in a position to make a statement which will undoubtedly lead to change, are doing so.

*(Editor's note: The Viewpoint Column offers readers an opportunity to express their opinions on topics related to the profession of animal keeping. It is not a forum for expressing disagreements with employers about labor-related issues. Opinions expressed in this column do not necessarily reflect those of AAZK, Inc. or Animal Keepers' Forum. Publication of opinions in this column does not constitute endorsement by AAZK, Inc. or Animal Keepers' Forum. Materials submitted are published at the discretion of the editor.)*

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## **Have You Purchased Your Enrichment or Biological Information CD Yet?**

Following the recent release of the Third Edition of the AAZK Enrichment Notebook (CD), review copies were sent to several people so they could give the CD a try and see what they thought. Peter Dickinson, editor of *ZooNews Digest* out of the United Kingdom, had the following to say about this new resource - "I have spent an enjoyable past two days exploring this CD. Over the past few years I have extensively read enrichment papers and books both in paper and web format and this one takes the biscuit. It is the best I have come across so far. Certainly a very worthwhile addition to every zoo library. If you have no enrichment literature then this should be your first purchase. If you have a big enrichment library then this needs to be your next purchase! Buy it!"

We are pleased that Peter found this CD so worthwhile and for allowing us to share his comments with you. Order forms for the Enrichment Notebook CD, as well as the Fourth Edition of the Biological Values Information on Selected Mammals CD, are available at the AAZK website ([www.aazk.org](http://www.aazk.org)) and order forms appear in this issue of *AKF*. Both CDs may also be ordered by phone from Administrative Office using a MasterCard or Visa. Cost for each is \$25.00 for AAZK members and \$40.0 for nonmembers. Prices include domestic and Canadian shipping. To order by phone call 1-800-242-4519 (US) or 1-800-468-1966.

# Legislative/Conservation Update

Compiled by Georgann Johnston  
Legislative Advisor  
Sacramento, CA



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## California Developer Seeks Permission to Kill Condors

A company that wants to build 213,000 homes in the Tehachapi Mountains area of Southern California has applied for a federal permit allowing it to kill endangered California condors (*Gymnogyps californianus*) that may wander into the area. The Tejon Ranch Company says it has no desire to slaughter the rare birds but an incidental take permit allowing the developer to “harm, harass, trap, shoot or kill” them would protect the company if birds are injured during or after construction. The permit is required under a habitat conservation plan for the ranch north of Los Angeles that the company is jointly preparing with the USFWS.

“The misconception is that this permit would allow for the killing of the bird,” said Rick Farris, a USFWS division chief in Ventura, California. “What the permit does is allow them to conduct their lawful activities and assure that what they’re doing is not going to cause the extinction of the species.” Public meetings and a period for written comments on the proposal have been scheduled by the USFWS. It is possible that the permit could be approved and the developer allowed to proceed by the end of 2004.

Condors have been the subject of a 25-year, \$35 million effort to restore the endangered birds to some of their native habitat. The Tejon Ranch is a favorite feeding and resting spot for the birds. The ranch has plans for a biologist to frighten away any birds that land on houses or in backyards and also plans to avoid building homes on the high ridge lines that the condors frequent. “But there is the potential that condors will start hanging around the houses; they’ve done that in the past,” Farris said. “When they do that we have to change their behavior. That may even involve removing them from the wild and putting them back in captivity.”

Many groups oppose the permit. “Giving a permit to harass, harm or kill California condors really goes against all the work being done to turn around the fate of that species,” said a spokesperson for Defenders of Wildlife. “It seems an affront to the people who have spent so much time and taxpayers’ money to keep this species from becoming extinct. Now we’d allow the few condors alive in the wild to be taken in the name of development.”

Jessie Grantham, interim coordinator of the government’s condor recovery program stated: “Actually I’m a little concerned about this. This is sort of a collision between wildlife and humans. How do we deal with an animal that can cover great distances and needs significant space to survive? The condor is a flagship species, and the flags are flying everywhere.” *Source: Monterey Herald Newspaper 13 July 2004*

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## New Zealand Kakapo’s Dying of Bacterial Infection

Three of the world’s rarest parrots, New Zealand’s big green kakapo (*Strigops habroptilus*), died over a 24-hour period in mid-July 2004. The deaths, apparently from septicemia, came after New Zealand’s Department of Conservation moved 19 birds to an isolated island. With only 83 kakapo left worldwide, conservationists were preparing for an emergency plan of hospital-style intensive care for the 16 still on the island.

Recovery program leader Paul Jansen said it was not thought that the island move has created stress, saying that the symptoms associated with the dead birds and one sick bird pointed to other problems. “We’re still debating about whether we grab birds and do an intensive care hospital program, regardless of whether they show symptoms, or we do the treatment in the field,” he said.

Most of the existing members of the species live on bleak Codfish Island at the southern end of New Zealand, with a smaller protected population on Maud Island at the top of the South Island. In a bid to guarantee the security of the species, conservationists moved the 19 birds from Codfish Island to Chalky Island, 120 km away. Conservation Minister Chris Carter was shocked at the deaths of “one of our most precious and loveable bird species. Everything that can be done is being done to save this critically endangered species. This is a sad reminder of just how vulnerable they are.” *Source: Australian Broadcasting Co. News in Science 14 July 2004*

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### **Pending Legislation in U.S. Congress Affecting Animals**

The following bills impacting animals are currently pending before the House or Senate of the U.S. Congress:

**Animal Fighting (HR 1532, S736)** Would authorize felony-level jail time for federal animal fighting violations and ban the interstate and foreign transport of cockfighting weapons.

**Horse slaughter (HR857, S2352)** Would prohibit the slaughter, import, export, trade and transportation of horses for human consumption.

**Antifreeze Safety (HR1563)** Would require inclusion of a bittering agent in engine coolant and antifreeze to prevent poisoning of animals and children.

**Antibiotic Resistance (HR2932, S1460)** Attempt to curb antibiotic overuse that supports unnaturally overcrowded and unsanitary conditions on factory farms and endangers public health.

**Bear Bating (HR1472)** Would prohibit bear bating on federal public lands.

**Yellowstone Bison (HR3446)** Would establish a moratorium on the killing of Yellowstone bison and allow the herd to roam freely over federal lands.

**Seals (S Res.269)** Urge the government of Canada to end the commercial seal hunt.

**Turtles (HR3378, S1210)** Would authorize funding for projects to conserve nesting habitats and prevent illegal trade in marine turtle parts.

**Migratory Birds (HR4114)** Would weaken the Migratory Bird Treaty Act’s protections for at least 94 “nonnative” bird species.

**Downed Animals (HR4121)** Would modify USDA’s current ban on downer cattle by allowing them to be used for human food if the animal’s problem is a broken limb or dislocated joints. *Source: HSUS Humane Activist, vol. 6, no. 2, March/April 2004*

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### **Notes from the International Whaling Commission Meeting**

Japan and other nations are seeking to end the moratorium on the hunting of whales during this week’s International Whaling Commission meeting, reports *Terra Daily*, 7/19. The moratorium was introduced by the IWC in 1986 to prevent the extinction of a number of endangered species. Japan and Iceland currently take hundreds of whales each year, mostly minke whales (*Balaenoptera acutorostrata*) and Bryde’s whales (*Balaenoptera edeni*), for so-called “scientific” purposes allowed under the IWC’s rules.

“The International Whaling Commission declared Tuesday that endangered gray whales in the waters around Russia’s Sakhalin Island need urgent protection from oil and gas development in the area,” according to the *Associated Press*, 7/20. There are only about 100 gray whales in the population, and “the species was listed as critically endangered in 2000 because of its geographic and genetic isolation.” The commission’s scientific committee has said “only 23 reproductive females are left in the world.” *Source: GREENlines Issue #2153 7-21-04*

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### **Can Great Wall of Congo Save Mountain Gorillas?**

Farmers have overrun thousands of acres in Congo's oldest national park, the latest threat to more than half the world's 700 remaining mountain gorillas (*Gorilla beringei beringei*). Stacking lava rocks, 200 workers are building a wall at the Rwandan border of Virunga National Park in a desperate effort to stop farmers, fighters and refugees from sweeping into the home of these endangered primates.

After a decade of conflict, militia forces still roam Virunga's forests, said Eugene Rutagarama, head of the International Gorilla Conservation Program. Officials suspect the fighters in the recent killings of three park workers. "We want to have this wall built as soon as possible," Rutagarama said. The 3-foot-high wall, however, will be little more than a "symbol to show the limit of the forest," he acknowledged. "I don't think it can really stop people."

The gorillas live on the misty, green tops of volcanoes along the Congo-Rwanda border, nesting in the forests as farmers work terraced fields on the volcanoes' sides below. About 380 mountain gorillas live in Virunga. Their only other known home is the Bwindi Impenetrable Forest, a national park in neighboring Uganda.

The latest threat to Virunga's gorillas came in May and June, when between 5,000 and 6,000 Rwandan and Congolese farmers overran unarmed guards, leveling 3,800 acres of the 100,000-acre park for cattle ranching. They leveled trees, turning forests into pastures, and set thousands of cattle to grazing. Source: Daniel Balint-Kurti, *The Associated Press* via *TribNet.com* 7-16-04

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### **Already Endangered Pelicans Further Imperiled**

In early July, more than 20 endangered brown pelicans (*Pelecanus occidentalis*) crashed onto sidewalks and roads in Arizona, mistaking the heat-induced shimmer of the paved surface for lakes and creeks," reported the *Arizona Republic*. Wildlife officials say that the pelicans were in southern Arizona, flying out of Mexico's Gulf of California. The birds were treated for dehydration and emaciation.

Meanwhile, in California "Avian experts are trying to determine why an unusually high number of California brown pelicans are washing up on local shores - weak, dehydrated and near death," reports the *Los Angeles Times*. Over 100 endangered birds have been brought to Sea World San Diego and treated by specialists, given vitamin injections, fluids and food. Bird experts are uncertain of the cause of the sickness, but say the birds act as if they are starving. Sources: *GREENlines Issue# 2147* 7-13-04 and *GREENlines Issue# 2149* 7-15-04

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### **Great Cats and Rare Canids Bill Introduced**

"Several wildlife groups, including Defenders of Wildlife, the American Zoo and Aquarium Association, Conservation International, the Wildlife Conservation Society, and World Wildlife Fund, have joined forces with Congressmen Clay Shaw (R-FL) and Tom Udall (D-NM) to introduce the "Great Cats and Rare Canids Act," which provides funding for the conservation of foreign feline and canine species," according to a July 15th Defenders of Wildlife press release. Wild cat and dog species are threatened by loss of habitat, poaching, trade in their skins and parts, disease and pollution. The bill creates a new fund for international conservation programs for endangered and threatened species, such as lions, leopards, cheetah, jaguar, Iberian Lynx, and African Wild Dog. Source: *GREENlines Issue #2150* 7-16-04

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### **Interior Dept. Proposes Delisting of Northeastern Gray Wolves**

"The Interior Department is proposing to lift endangered-species protection for the gray wolf (*canis lupus*) across much of the country, although the animals will remain "threatened, and shielded by federal law in the West," according to the *Associated Press*. The proposal will delist the Northeastern population of gray wolf, which includes Minnesota, Wisconsin and Michigan, where there are about 3,000 wolves, and New England, where there are no wolves. Conservationists called the proposal "short-sighted" because it removes protection from New England states where gray wolves could migrate from Canada. "Wolf recovery in the Great Lakes represents a tremendous wildlife success story. But the Fish and Wildlife Service should not abandon efforts to recover the wolf in the Northeast. This proposal will remove protection for wolves far beyond the states where wolf recovery

is actually taking place,” said Larry Schwieger, president of the National Wildlife Federation. *Source: GREENlines issue #2150 7-16-04*

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### **Scientists Object to Bad ESA Bills**

Over 420 scientists from across the country have signed a letter to Members of Congress expressing strong reservations about legislation that would undermine habitat protection and change the way science is used in Endangered Species Act decisions. “Some people who are critical of the way the Endangered Species Act has been employed think that perhaps too much attention and reliance has been given to models as opposed to empirical data. This, I think, reflects a serious misunderstanding about how science works,” says Gordon Orians, professor emeritus, department of biology, University of Washington. As the Ecological Society of America stated in its 1996 report, *Strengthening the Use of Science in Achieving the Goals of the Endangered Species Act*, “Biologists in the agencies responsible for implementing the Endangered Species Act generally try to use the best scientific information and methods available. Failure to use the best available information and methods is generally due to inadequate budgets and overworked staff.” *Source: GREENlines Issue #2152 7-20-04*

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### **First Blue Whale Spotted in Alaskan Waters in 30 Years**

Researchers cruising the waters of Alaska to research the endangered humpback whale got a rare treat earlier this month when they spotted the first blue whale (*Balaenoptera musculus*) in Alaskan waters in 30 years, reports the *Anchorage Daily News*. “It could mean that the great whales, which can grow longer than an NBA basketball court and weigh more than a pile of 50 Hummers, are making a comeback after commercial whaling drove them to the verge of extinction.” The 224-foot research vessel McArthur II carries an international expedition on the lookout for humpback whales (*Megaptera novaeangliae*). Sponsored by NOAA’s Southwest Fisheries Science Center in San Diego, it will spend four months counting, photographing and gathering tissue samples from humpbacks from Canada to Russia. *Source: GREENlines Issue #2160 7-30-04*

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### **Endangered Leatherback Sea Turtle Gets Started Early**

An endangered leatherback sea turtle (*Dermochelys coriacea*) made an early arrival at Costa Rica’s PRETOMA sea turtle conservation beach, reports a press release from that group. The sea turtles don’t generally begin nesting on Costa Rica’s Pacific Coast until early October. The turtle laid a whopping 102 eggs and 29 yolkless eggs. This is well above last year’s average size for Pacific leatherback nests at Playa Caletas, which was 56 eggs. The eggs were taken to PRETOMA’s project hatchery at the site, where they will be protected and monitored until the hatchlings emerge. PRETOMA’s sea turtle protection project at Playa Caletas is made possible with support from the National Wildlife Federation, Marine Conservation Action Fund and Sea Turtle Restoration Project. *Source: GREENlines Issue #2067 8-10-04*

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### **Court Ruling Boosts Owls Need for Habitat to Recover**

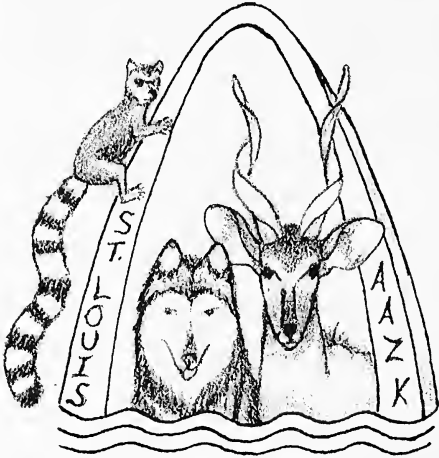
The 9th U.S. Circuit Court of Appeals ruled against a number of timber cuts planned for national forests in the Pacific Northwest, ruling that regulations ostensibly protecting the spotted owl and other threatened species are “blatantly contradictory to Congress’ express demand,” reports the *Seattle Post-Intelligencer*. “In a ruling covering 6.9 million acres but with potentially even greater implications, the 9th U.S. Circuit Court of Appeals said it’s not enough for the U.S. Fish and Wildlife Service to merely keep threatened species from dying out. The government also must protect natural areas deemed critical to the recovery of battered animal populations so that they no longer need protection under the Endangered Species Act, said the court, which is based in San Francisco and covers nine states.” *Source: GREENlines Issue 2067 8-10-04*

*Editor’s Note: GREENlines Issues are a daily news digest from the Endangered Species Coalition about imperiled species and the people working to stop extinction. For more on what you can do visit - <http://www.stopextinction.org>*

# Chapter News Notes

## St. Louis AAZK Chapter

The St. Louis AAZK Chapter has had a busy and productive year. Over the winter, we designed our first official Chapter t-shirts. Each year, we will feature a different animal from one of our zoo's "Conservation Centers" and the proceeds from the shirts will go to help the featured conservation project. For 2004, we put our Chapter logo on the front and a picture and some information about the Grevy's Zebra on the back. We have sold 73 shirts so far and raised over \$270.00. These t-shirts will be available to buy at the conference in Dallas for \$10.00 each.



In April, we hosted our second annual Bowling for Rhinos. It was a huge success! We raised \$5,000.00 through bowling, pledges, a raffle, and a silent auction.

We have been participating in an on-going cell phone recycling project. We have collected over 800 phones so far, and all the proceeds are donated to the Balikpapan Orangutan Society. We participated in our zoo's Earth Day celebration by handing out information about the Balikpapan Orangutan Society and conservation tip sheets, and selling our t-shirts.

We have made over \$300.00 from selling animal-created art work to our marketing department,

who in turn gives the art work to major donors. Also, with the zoo's permission, we continue to collect change from two of the fountains on zoo grounds.

Some of our non-fundraising efforts include hosting an in-house speaker series at our monthly meetings and posting "Conservation Thoughts" in employee areas around the zoo. In September and October we will be hosting our first ever Craftin for Critters. Our new Chapter Liaison is Katie Best.

*---Katie Best, Chapter Liaison*

## Chattanooga Chapter AAZK

Here is an update! We are new, so we are getting ready to submit our new logo as well as planning projects and fundraisers for the year.

We have been taking pictures on Saturdays at our Zoo for one of our ongoing fundraisers. We charge a small fee to let the public get a polaroid taken with one of our largest pythons named "Blondie". It has been a great success financially as well as educationally. We hope to do this throughout the summer and as often as possible throughout the year.

*---Heather Best, President*

## CHAPTER LOGOS

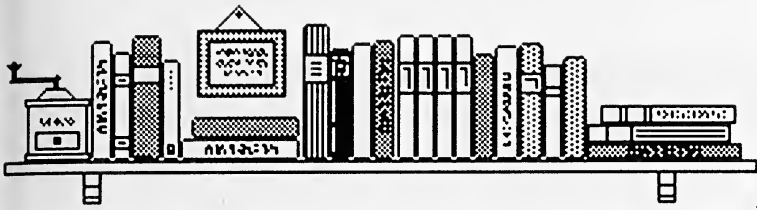
Does your Chapter have a new logo? Please keep us up-to-date if you change your Chapter logo. Also, new Chapters are encouraged to send in a copy of their logo as soon as they adopt one. Logos may also be sent as graphic file attachments (tiff or jpeg) to the email address listed below.

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# Book Reviews

## **The Dawn of Conservation Diplomacy: U.S.-Canadian Wildlife Protection Treaties in the Progressive Era**

By Kurkpatrick Dorsey 1998

University of Washington Press, 1326 Fifth Ave., Ste. 555, Seattle, WA 98101-2604

ISBN#0295976764

Hardbound 311 pgs. \$40.00

*Review by Brett Bannor, Keeper  
Zoo Atlanta, Atlanta, GA*

Three cheers for the Progressive Era! Those early years of the twentieth century that witnessed suffrage for women, direct election of U.S. senators, and—no doubt to the horror of many zookeepers—Prohibition. It was also an age when conservation concerns were voiced by many, including President Theodore Roosevelt who will forever be associated with fauna more than any other Chief Executive. He was, after all, called a “Bull Moose” and when he spared the life of a bear cub while on a hunting trip, the incident inspired the creation of that most enduring of all animal themed toys, the teddy bear.

It was this era when the notion that wildlife was not an inexhaustible resource finally took hold; one manifestation of this awareness was the birth of three conservation treaties between the United States and Canada. The story behind the treaties, the ultimate failure of one but the success of the other two, is the theme of Kurkpatrick Dorsey’s *The Dawn of Conservation Diplomacy*.

A word of caution is in order here. This is a book far more about people, the eclectic mix of individuals responsible for the assets and shortcomings of Progressive Era conservation, than about the creatures highlighted for protection. How much the reader will enjoy this is dependent on how much he enjoys a historical framework that carefully examines details such as which diplomat, politician, or scientist wrote what in a letter to who on what date. If the reader is amenable to this, he will find Dorsey’s work an interesting character study of a number of prominent men. Zookeepers working in Gotham may be amused or taken aback by the treatment of famed New York Zoological Society chief William Hornaday; he comes across as quite the blowhard. At least he was a blowhard with his heart in the right place, as he persevered tirelessly in his crusade for conservation.

The three international agreements Dorsey discusses are the Inland Fisheries Treaty, The North Pacific Fur Seal Convention, and the Migratory Bird Treaty. While today the notion of the United States and Canada working together to preserve wildlife seems almost inevitable, at the time this was quite a revolutionary concept. That the two countries could attempt any agreements at all is remarkable given the strained relationships existing between them at the time. Indeed, as Dorsey notes, President Theodore Roosevelt even moved troops to Alaska to emphasize America’s unwillingness to back down from its stand in a boundary dispute with Canada.

Even in an atmosphere tainted with suspicion and mistrust, however, Canada and the United States were bound to conclude that certain realities caused by the geographic proximity of the nations made bilateral give and take desirable, perhaps even necessary. One of these realities was that the waters at the U.S.-Canadian interface, including the Great Lakes, had become seriously over fished, and a reduction in take was necessary if commercial fishing was to survive. It was in this context that the Inland Fisheries Treaty of 1908 was drafted, with obligations, restrictions and quotas that were to be observed by both countries.

Treaty making is, at least in the United States, basically a two-stage process. While the President has the power to make treaties, with the concurrence of two-thirds of the Senate, this action is by itself of limited effect without the second stage—legislation implementing the treaty being passed by both houses of Congress. Dorsey shows that political disagreements led to legislative inertia and ultimately rejection of implementing legislation for the fisheries treaty. A frustrated Canada finally formally acceded from the agreement.

Dorsey attributes the failure of the Inland Fisheries Treaty to a number of factors, one of which was that fish were not beneficiaries of extensive efforts by conservation groups in their behalf. Not so for the popular animals involved in the second treaty covered by the book, the North Pacific Fur Seal Convention. Basically, the situation concerned a dispute over pelagic, or at sea, harvesting of these marine mammals. To breed, most fur seals landed in U.S. territory—the Pribilof Islands off Alaska. While pups are born with a nearly even sex ratio, few of the males that reach adulthood are fortunate enough to breed, since a powerful bull fur seal may have a harem of 30 cows. This meant that a large number of males could be—and were—harvested on land for their fur without significant impact on the population.

Canada, Japan, and other nations harvested the fur seals too—but they did it at sea where sexes could not readily be differentiated. Thus, cows as well as bulls were killed; often these cows were mothers feeding at sea and their death meant starvation for many pups back on Pribilof. In short, land harvesting of the fur seals was potentially sustainable; pelagic harvesting was not. The key to maintaining fur seal populations at a healthy level was an agreement by which the U.S. agreed to cut other nations in on the Pribilof profits in exchange for their promise to end pelagic sealing.

No less striking in its scope and its success was the third U.S.-Canada agreement discussed, the Migratory Bird Treaty (MBT) of 1916. Dorsey emphasizes here the positive impact the country's many birdwatchers had as they flooded their representatives in Congress with letters supporting the formal establishment of a joint effort by the two nations to preserve birds. A radical rethinking of the notion of "possession" of wildlife came out of these efforts. Missouri, the state that stood in the forefront of opposition to the treaty, maintained that it had sole power to regulate hunting of birds within state borders. Success in funding and enforcing the MBT came about only because its supporters successfully championed the argument that it is preposterous to consider a bird as "belonging" to Missouri when in many cases it is just passing through, having hatched in a northern state or Canada and often wintering in yet another state farther south.

Since Dorsey confines himself to a consideration of only three treaties formed within a few years of each other, the casual reader may think that this is a fairly exhaustive treatment of the topic. Having done quite a bit of research on the Migratory Bird Treaty myself, however, I can attest that some aspects of Dorsey's coverage are summary at best. For example, he devotes merely two pages to *Missouri v. Holland*, the landmark United States Supreme Court case that upheld the MBT. No doubt Dorsey could have devoted an entire chapter to the case.

Another minor complaint is that the zoological statements made in the book are not always quite accurate. This is not uncommon in books featuring animals written by non-scientists (Dorsey is a history professor). Still, one winces when on page 190 the author refers to "pregnant" ducks. A check of any ornithology text would have shown him that this term is not applied to birds.

Overall, however, Dorsey's effort is commendable. *The Dawn of Conservation Diplomacy* is not for those with a casual interest who desire a quick explication of the scope of wildlife preservation. It is, however, a valuable source for those wanting to read a serious historical study ably demonstrating that, where wildlife conservation is concerned, cooperation, conflict, and compromise can ultimately mean success or failure.

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# The Acouchi Advantage

*By Kristin Moro, Keeper  
Natural Wonders, Houston Zoo  
Houston, TX*

The Natural Wonders department was created at the Houston Zoo to integrate education, conservation, and visitor experience under one roof. It will be housed in a newly renovated building which includes large-sized exhibits that express habitat types and all double as 'stage' spaces. The purpose of Natural Wonders is to demonstrate animals' natural behaviors in their environments, pass along a conservation message or two, and create direct animal connection experiences for each guest who comes through the door.

The animals for the project had to be temporarily removed from the building and housed in unused buildings in the former children's zoo area during the building renovation. The length of time for this 'temporary' housing was originally thought to be two years, however, it drew out into three years. Although the caging was adequate for the animals, none of the exhibits had holding areas or shift doors. This meant that in order to do the monthly disinfection of the cage, the animals had to be kenneled and removed from the exhibit.

Prior to the initiation of a training program in the section, kenneled the animals simply meant catching them up with nets and manually placing them into a kennel. This included several species of tamarins, squirrels, and other small rodents. This method was stressful for both the animals and the zookeepers.

Under the direction of a new curator, Tonya 'Tinker' Boyd, a training program encompassing all the needs of the new department was started. The training program had several principals including better monitoring of animal health, removing the stress of animal-keeper interactions, and creating performance behaviors to use in the new building. Using these principals, a building-block of training goals was established for the staff which included: 1) Weight Monitoring, 2) Kenneling, 3) Veterinary Examination (for some species only), 4) Performance Behaviors, and 5) Enriching Behaviors.

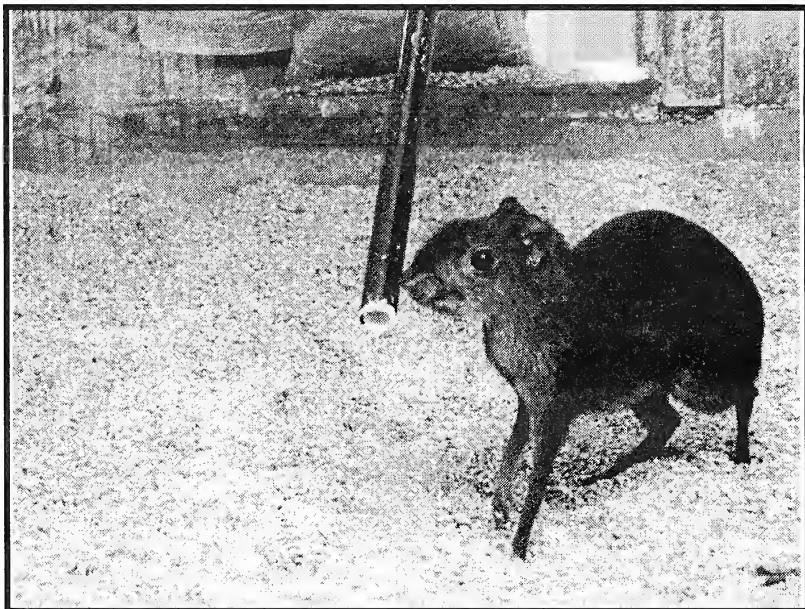
The initial and key goals were to be able to weigh and kennel each animal. After that, with our rodents, we could train 'examination' behaviors to allow veterinarians to be able to physically touch the animals without having to restrain them. Our next goal was to train the behaviors the animals would be using in their performances in the new building. Once the animal had accomplished all of the above goals, the trainer could continue to train new behaviors for enrichment purposes.

The Natural Wonders department holds 3.1 Green Acouchi (*Myoprocta pratti*). In the beginning, the Natural Wonders department consisted of only three staff members which meant not all the animals could be part of the training program. Two staff members were each assigned one acouchi to train the same behaviors simultaneously in order to help each other through the process. I was assigned a four-year-old male acouchi named Bill. The other acouchi starting the training process was a two-year-old male named Jake.

Training was to proceed using positive reinforcement. The acouchi diets at the Houston Zoo consist of Mazuri® rodent block, mixed greens, and freshly cut produce at a 60:40 (block:greens/produce) ratio. We were able to continue to free feed the acouchis their block and greens and simply remove the produce and use it for rewarding purposes. As long as Bill and Jake participated in the training session, they could earn all their produce. (Luckily, they were more than eager participants!)

We began by teaching a bridge. A clicker was decided against immediately due to the inconvenience of having to hold it in our hand. Next, we tried blowing a training whistle in the building. This had to be eliminated also as the pitch of the whistle mimicked the sound of tamarin alarm calls and made all the tamarins and marmosets in the building upset. Our next try was using a vocal bridge with the word 'good'. For two weeks we tirelessly trained Bill and Jake three times a day pairing the word 'good' with a food reward seeing little or no response. Finally, the decision was made to change the bridge once again to a short whistle from the trainer's mouth. This "human whistle" did not seem to bother the tamarins at all and we saw immediate results with the acouchis. Within one or two sessions it was clear that Bill and Jake understood their bridge and were immediately looking to the trainer for food whenever they heard the whistle.

Our next major goal was to get the acouchis onto a scale. We decided to accomplish this by first teaching them to touch their nose to a target, and then use the target to guide them onto the scale. Fortunately, acouchis need little to no desensitization to new tools or equipment used in the training process. They are naturally curious and their normal response to something new in the exhibit is to come over and sniff it. Harnessing this natural behavior, we were able to teach the acouchis to target in only two sessions in one day. This was very encouraging following the frustration with the bridge training. At this point in the training it became obvious that Jake's handicap would have to be accommodated for in the training process. Jake is missing his left eye and the trainer must account for this when presenting visual cues such as the target.



Acouchi target training at the Houston Zoo.

The scale training itself posed a logistical problem. We use an Acculab VI-4kg to weigh all our animals under 4 kg. We were able to easily use the target to encourage the acouchis to approach the scale. The acouchis were more than willing to try and get onto the scale, but the weight platform surface was too small for the whole body of the acouchi to sit on comfortably. We tried using Velcro® to attach a cafeteria style tray to the platform surface, but this was very unsteady and the acouchis did not like to get onto the scale. Our next attempt was to use Velcro® a large plastic bowl to the weight platform. This proved to be much more steady and positive for the acouchis, but we were noticing they slipped a bit once they were inside the bowl. By adding a piece of no-skid vinyl in the bottom of the bowl we found the perfect acouchi weighing device. By the third day of scale

training, Bill and Jake were hopping into the scale bowl with a simple tap of the target on the front of the scale bowl.



Acouchi scale weighing at the Houston Zoo.

Next we were anxious to tackle the task of kenneling Bill and Jake. We began by placing the kennel in the exhibit with the acouchi and targeting them in front of the door. On the second day of kennel training we placed the target through the side bars of the kennel and the acouchis targeted right in. By the fourth day of training since the initiation of the whistle as a bridge, Bill was going in and out of the kennel with confidence. Bill was able to be kenneled with the door closed for long periods of time by the fifth day of kennel training. Jake took a bit longer to build confidence, but was being fully kenneled by his tenth day of training.

Following these behaviors marked as 'necessary' for our training program, I decided to train Bill on some touching desensitization for veterinary purposes. In the wild, the acouchi is the fundamental prey item. Touching of any kind is against their natural instinct. Knowing this, I paired all contact with large rewards. Bill was extremely averse to my touching his head and facial area, so I began by touching his back. Within seven training sessions Bill allowed me to touch him all over his body, including inside his ears and on the tip of his nose (an acouchi's most sensitive spot). In order to train him to be picked up, I first trained him to sit in a plastic container and allow me to pick him up while sitting inside. Next, I simply removed the plastic container and could pick him up easily by hand using his command 'lift'. This behavior proved useful during his annual exam as we simply had to use the lift command to transfer him from his kennel to the anesthesia cage at the clinic instead of netting him out of the kennel. This resulted in much less stress for both Bill and his keepers.

During this time, Bill began to make different vocalizations at the beginning of each training session on Day 36 of the training program. These specific vocalizations had never been heard before by zookeepers working with him and seemed to be due to enthusiasm in anticipation of a training session.

Once our husbandry behaviors had been trained, we taught new behaviors simply as enrichment for the animal to learn new things. Bill learned to stand up on his hind legs in two sessions. He learned



to 'pounce' up on top of a box or platform in one session. I was able to capture a free-standing 'jump' high into the air in two sessions, although it took about three days to get him to jump as high as I was asking.

Bill required bribing with food only one single time to get a turn behavior on cue and then turned each time with a simple finger point cue combined with a verbal cue 'turn'. At this point, the supervisor suggested experimenting with this turn behavior to see if we would be able to put it on a verbal cue only. We had been using hand cues for all behaviors before. Bill caught on to the verbal cue in two tries. Unfortunately, we have not experimented with other verbal cues yet to determine if acouchis are able to distinguish different words from each other.



Acouchi kennel training at the Houston Zoo.

The final step was to train the behavior that we wanted him to perform during our presentations in the new building. This was to be an A-B behavior either from crate to crate across the exhibit (with the crates hidden, of course) or from crate to presenter and back to crate. We first trained the crate to crate A-B inside his exhibit which took only two training sessions to accomplish. Following this, we moved into a new larger room in order to practice covering distances between crates. During his first session, he was wary to come out on the tile floor as the surface was slippery. After putting down rubber matting in front of the kennel, he did many repetitions from target and back into kennel during this first session. It took a week, but Bill was running from crate to crate like a champ.

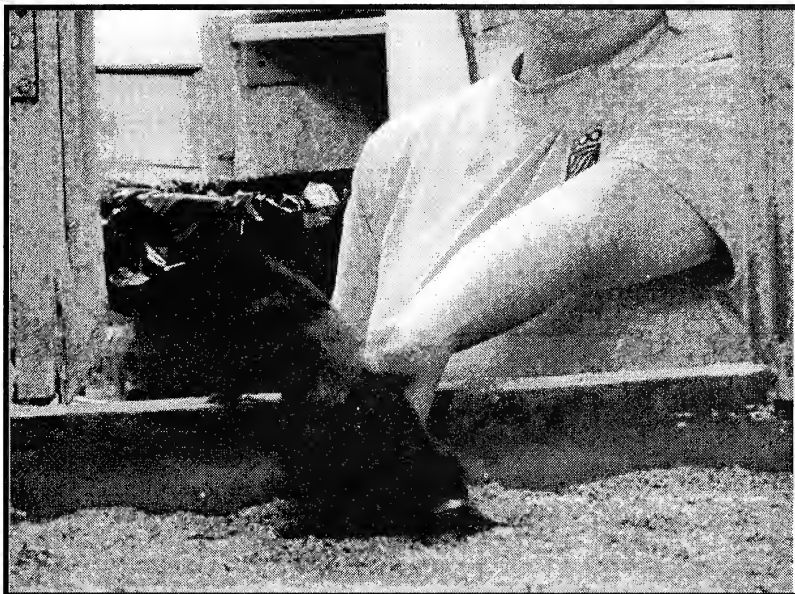
We finally decided the behavior in the presentation would be an A-B from crate to presenter back to crate. Holding the target near the trainer's feet, Bill learned in one session to come to the trainer and then return to the kennel. After several days of practicing different distances we decided his behavior was solid and took him to a stage in an auditorium. Bill ran his behavior perfectly on the first try, earning him the title 'Superstar Bill'.

The only behavior that we have been unable to capture or train is the natural behavior of acouchis to bury large pieces of food in the ground and store for later use. This natural behavior can be used to describe the acouchis' role in rainforest re-forestation where the seeds they bury and forget eventually grow into plants and trees. Training this proved to be a difficult task. If given a large piece of food,



(in the hopes that he would bury it and we could bridge and reinforce the behavior), the acouchi usually just ran around excitedly with the food in its mouth or ate the piece of food. We tried using wooden block, plastic pieces, and other objects with food scent or other stimulating scents on them, however, the acouchi did not recognize these items as food and would simply drop them on the ground. We are still investigating other methods of capturing this behavior.

We continue to pursue training for all the animals in our collection that will be housed in the new building. We have discovered with the acouchi training program that no limitations can be placed on what any species is or is not capable of and that the creativity of the trainer is their only boundary. While all our superstar acouchis won't be jumping through flaming hoops for our audience (even though we know they could), we're sure that the experience of seeing them exhibit natural behaviors in their environments will have our guests oohing and ahing just the same.

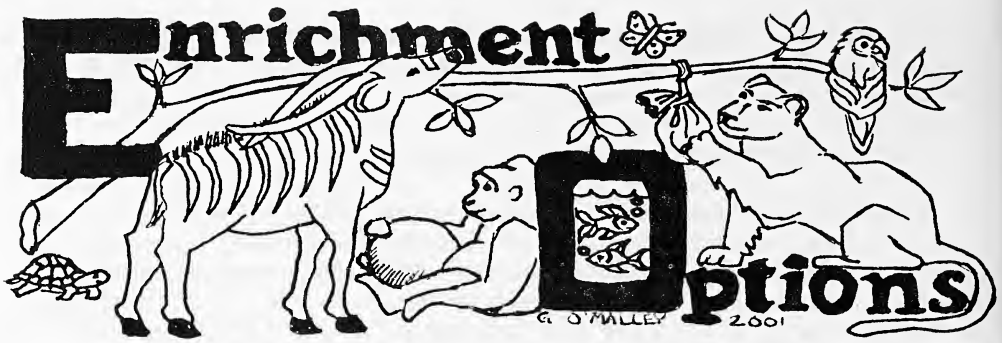


Acouchi veterinary examination training at the Houston Zoo.

#### Addendum

Since the composition of this paper, we have involved all of our acouchi in the training program. During my training with Tuca, another male acouchi, I was finally able to get a digging and burying behavior on cue. I began by placing a box filled with mulch, just large enough that he could sit in, into the exhibit. I trained him to get into the box and stay there. Next, I re-enforced any movement of his head downwards towards the mulch. Luck was somehow on my side and he simply just started digging one day after I had reinforced him for putting his nose in the dirt. This behavior was captured and put on cue easily in one session. Then I trained him to hold a small metal washer in his mouth without dropping it. (I had to train this behavior without the box in the exhibit as Tuca wanted to dig in his box constantly and it was distracting.) I then re-introduced the mulch box in the exhibit and asked him to sit in the box, handed him the washer, and then cued him to dig once his placed the washer in the mulch. It is not an exact replication of the digging behavior they display naturally, but I believe it will exhibit the seed dispersal behavior of acouchi for presentations.

*(All photos provided by the author)*



*EO Editors - Dawn Neptune, Utah's Hogle Zoo  
and Rachel Cantrell, Disney's Animal Kingdom*

## Feeder Bags for Gorillas

*By  
Peggy Hoppe, Primate Keeper  
Birmingham Zoo, Birmingham, AL*

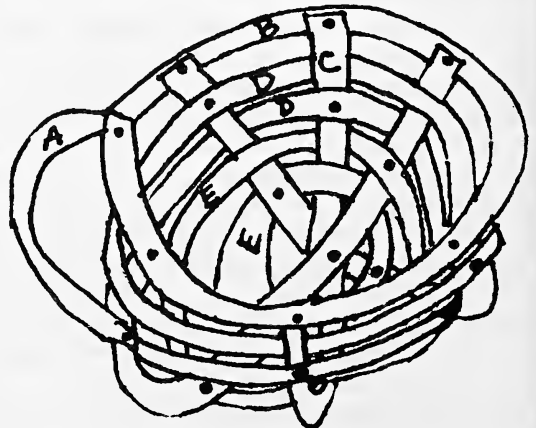
The Birmingham Zoo currently houses 2.0 Western Lowland Gorillas (*Gorilla gorilla gorilla*). Below is an enrichment device designed and developed for our gorillas.

### Gorilla Feeder Bag

The Feeder Bag was made to encourage increased effort in obtaining food, similar to a puzzle feeder, but strong enough to withstand the forces of a male gorilla. The item was fairly inexpensive to construct, but was slightly more time-consuming to build. The majority of the project was completed with one person, except where indicated. We used old "unusable" fire hose donated from local fire departments in the Birmingham area, along with 1 1/2" x 1/4" bolts, 1/4" nuts, and 1/4" washers. The fire hose used for this particular project was the 3" diameter hose, but larger fire hose can be used.

### Cutting Hose

There are five major pieces to the Feeder Bag, labeled A, B, C, D, and E (Fig. 2). One 20.5" strip of hose is needed for part A, the handle. One 61" strip of hose is needed for part B, the top ring. Three 54" strips of hose are needed for parts C, the vertical loops. Two 54" strips are needed for parts D, horizontal loops 1 and 2. Two 46" strips are needed for parts E, horizontal loops 3 and 4. Part A, the handle, may need to be longer depending on how it is attached. At the Birmingham Zoo the bags are hung from rope in the exhibit, to allow for easier side to side movement, and the end of the handle is fastened to the bag itself.

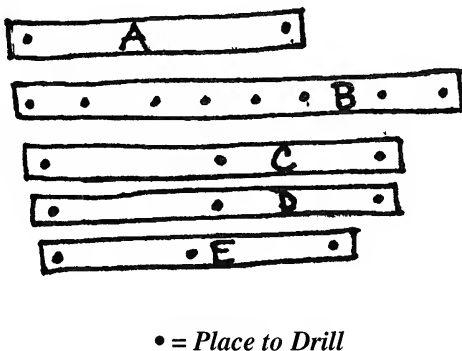


**Fig. 2 Building Configuration**

### Drilling Holes

After cutting all strips to length, using a 1/4" drill bit, holes were drilled in the fire hose at all fastening points (Fig. 3). Holes should be drilled about 1/2" from the end of the hose to allow enough hose so that it does not unravel, but short enough so that the end of the hose cannot be ripped out from the fastening point. There are two holes, one at either end of part A (Fig. 3). There are eight holes in part B, one at either end, and six holes evenly spaced throughout the rest of the hose for fastening of vertical loops (Fig. 3). There are three holes in parts C, one at either end and one in the center, for fastening to the top ring and to hold all three loops together at the bottom (Fig. 3). There are three holes in parts D, one at either end and one in the center for fastening to the vertical loops. There are three holes in parts E, one at either end and one in the center for fastening to the vertical loops (Fig. 3). In addition parts C, the vertical loops, will have two holes drilled in each strip, but that is best done just before the horizontal loops are fastened, for proper placement.

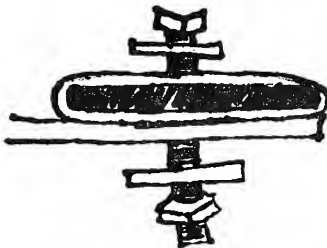
**Fig. 3 Drilling Configuration**



### Fastening Hose

Each fastening point has one bolt, one nut where three pieces of hose are fastened or two nuts (for better locking) where two pieces of hose are fastened, and two washers, one by the bolt head and one by the nut (Fig. 1).

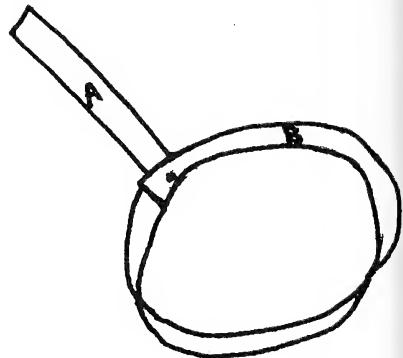
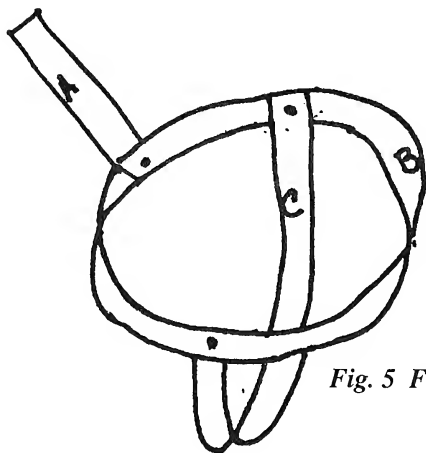
**Fig. 1 Fastening Configuration**



Part A was fastened to part B, with part A on the outside and both ends of part B on the inside (Fig. 4). A socket wrench and an adjustable wrench were used to provide the tightest fit at the fastening point (two people were helpful at this point). Parts C were fastened, one at a time, so that they looped and fastened along the top ring, directly across from each other (Fig. 5). After all three parts C were fastened to the top ring, they were secured to each other at the bottom (Fig. 6). Starting with the first vertical loop to the right of the handle, C-1, one hole was drilled towards the bottom of the bag, where the first horizontal loop was fastened, Part E, and then a second hole was drilled on the opposite side of the loop (Fig. 7). Each horizontal loop was fastened in two places on opposite ends. One of the part E pieces was woven in and out of the vertical loops, going over and under starting with the loop the hole was drilled in (Fig. 8). Using the second vertical loop to the right of the handle, opposite holes were drilled about 1 1/2" above the first horizontal ring, such that the two horizontal loops were next to each other and touching but not overlapping (Fig. 7 and 10). The second part E piece was woven through the vertical loops in a similar fashion as the first piece (Fig.

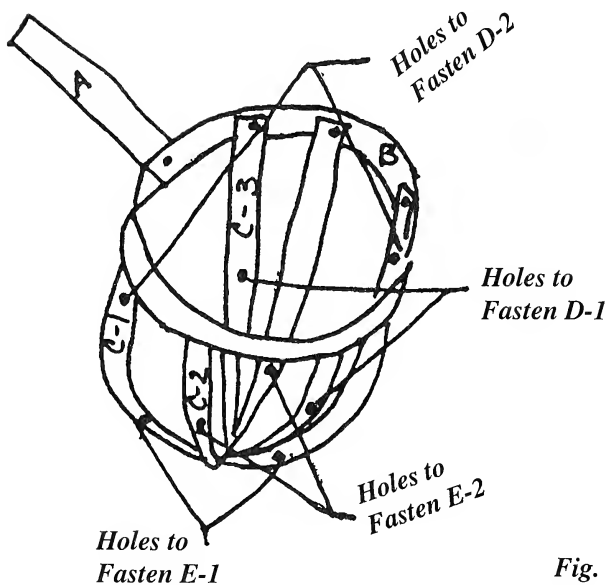
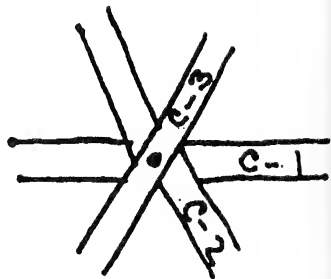
8). Moving to the next vertical loop to the right, similar holes were drilled as before, the first part D piece was woven and fastened as before (Fig. 7 and 8). Moving to the next vertical loop the process was repeated one last time (Fig. 7 and 8). The fastened part A, the handle, was looped to the outside of the bag and a mark was placed on one of the strips of fire hose, below the previous handle fastening point (Fig. 9). A hole was drilled at the mark, and this was the fastening point to make the handle complete.

*Fig. 4 Fastening Parts A + B*



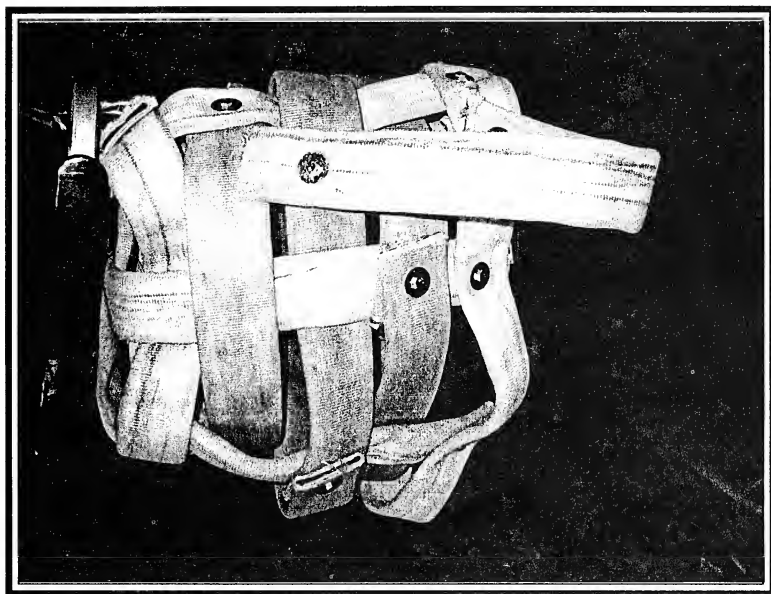
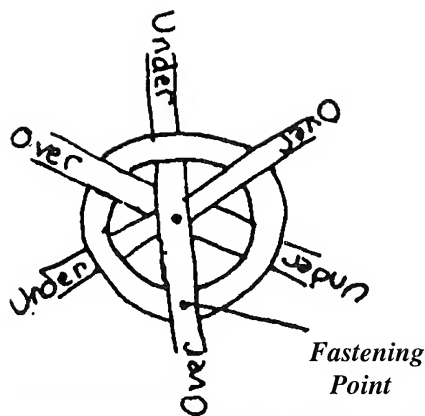
*Fig. 5 Fastening Parts C*

*Fig. 6 Fastening Bag at Bottom*



*Fig. 7 Holes to Fasten Parts D & E*

*Fig. 8 Weaving Configuration*

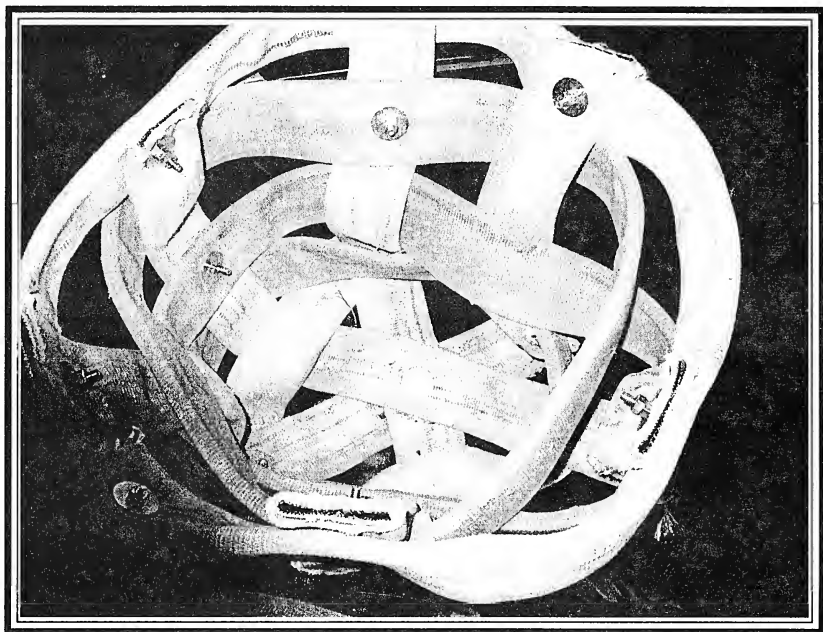


*Fig. 9 View of Feeder Bag Handle*

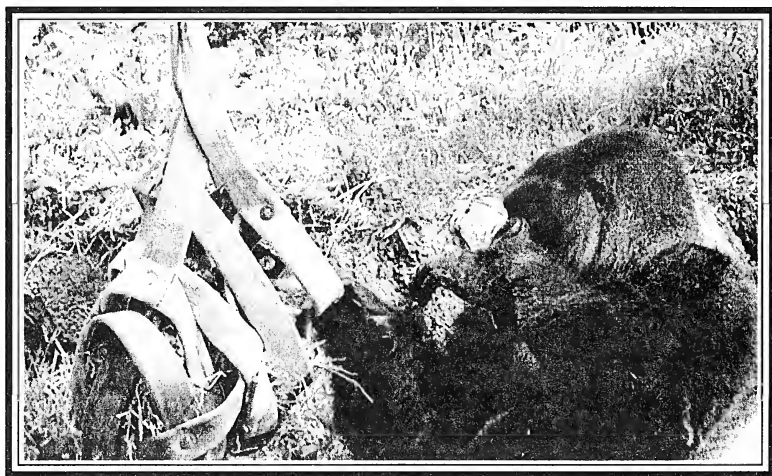
Bags were mounted in the exhibit, and are used three days a week, to offer variety in food presentation. The bags are used in different ways, sometimes lined with hay or straw and then food is hidden inside. The loops are loose enough that gorilla hands and arms do not get caught in the bag, yet tight enough that the food has to be worked out of the bag in order to be eaten. The younger male gorilla tends to dominate over food areas and obtain the preferred food items. With the feeder bags, he cannot get all the preferred food items, and is unable to defend both bags at the same time. As a result, both gorillas are able to split the food equally. The gorillas are occupied for about 30 minutes to one hour depending on whether hay or straw are used in the bag.

There are a few alterations that could be made to the bags to diversify their use, and to improve upon the original design. Fastening the horizontal loops in more than two locations would allow for a tighter fit and therefore, a greater challenge. Some of the horizontal loops could also be cut shorter so that they make a tighter circle, therefore making a greater challenge. In addition, finding a way to temporarily close the top ring would prevent the animals from reaching directly in the bag to obtain food. Finally, the handle could be attached across the top in a basket fashion, which would make pulling food out the top more difficult. These feeder bags are a fantastic way to diversify food presentations for Gorillas.

attached across the top in a basket fashion, which would make pulling food out the top more difficult. These feeder bags are a fantastic way to diversify food presentations for Gorillas.



*Fig. 10 View of Inside*



*Gorilla Using Feeder Bag*

*(All photos and drawings provided by the author)*

*(Ideas appearing in this column have not necessarily been tested by the editors for safety considerations. Always think ahead and use good judgement when trying new ideas. You are invited to submit materials for the Enrichment Options Column. This might include recipes, toys, puzzle feeders, olfactory enrichment ideas, etc. Drawings and photos of enrichment are encouraged. Send to: AKF/Enrichment, 3601 S.W. 29th St., Suite 133, Topeka, KS 66614-2054. Eds.)*

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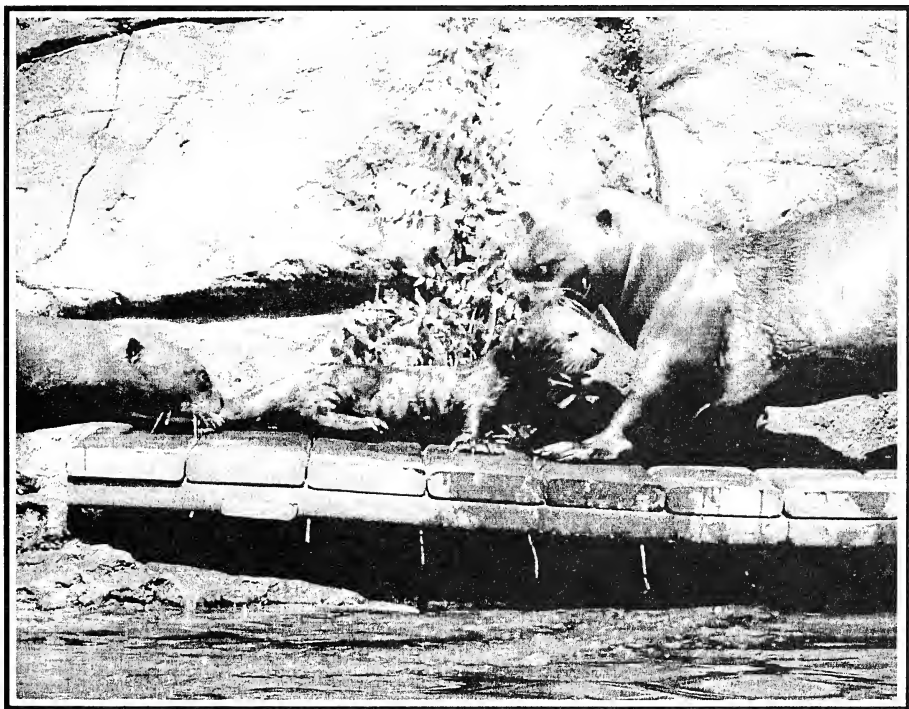


## *Philadelphia Zoo Home to First-Ever Giant River Otter Birth in North American Zoo*

The Philadelphia Zoo has announced the first-ever successful birth of a giant river otter (*Pteronura brasiliensis*) pup in a North American Zoo. The male pup was born on 30 March and was named “Primero” or “first” in Spanish. The Philadelphia Zoo is one of only two zoos in North America to exhibit this endangered species.

“Energetic and inquisitive, our giant river otters are zoo favorites for visitors of all ages — especially kids, who love to watch the otters race back and forth from one side of their pool to the other,” said Zoo President Pete Hoskins. “We’re thrilled by the birth of the new pup and excited to witness its development firsthand. This birth is a fascinating opportunity for our staff to make historic contributions to otter care and management in zoos.”

The pup was born to four-year-old female Nina, who was born at the Brasilia Zoo and came to the Philadelphia Zoo from Brazil in 2002, and 12-year old male Banjo (BAN-yo), who arrived in Philadelphia from Germany in 1996. It is the first surviving pup for both. Adult otters usually



**Primero with his parents in the giant river otter exhibit at the Philadelphia Zoo.**

*(photo courtesy of The Philadelphia Zoo)*

weigh up to 50-60 pounds (23-27kg) and grow to six feet long (1.8m). Giant river otters are the largest of the world’s 13 otter species. The pup now shares time with its parents in the zoo’s 13,600-gallon exhibit.

The Zoo's Carnivore Kingdom keepers, including Lead Carnivore Kingdom Keeper Michelle Jamison, worked hard to prepare for the birth, creating a cubbing den for privacy and installing cameras to enable them to monitor the otters without disturbing the new parents.

"We've been able to collect an incredible amount of data from observations we've made of the parents and their pup through our remote camera system," said Assistant Curator for Carnivores Chris Waldron. "Since there is so little known about otters — both in the wild and in zoos — these data will make incredible contributions towards efforts to establish a breeding program for this disappearing species."

Giant river otters are typically found in the river systems and wetlands of northern South America. Experts estimate that there are fewer than 5,000 and perhaps as few as 1,000 giant river otters left in the wild. The giant otter is threatened by habitat destruction and persecution and has virtually disappeared from much of its original range. Several factors have made the giant otter an easy and valuable target for poachers: its larger size, gregarious nature, daytime activity and tendency to approach intruders.

The giant otter is a flagship species for the Guyana Shield, a geographic region in northeastern South America targeted for conservation efforts. In protecting a key species such as the giant otter, conservationists hope to benefit a large number of plants and animals. The Philadelphia Zoo has supported these efforts through the development of several conservation programs including surveys to estimate numbers and distribution of giant otters, community wildlife clubs and environmental education radio programming. Much of this work has been carried out in partnership with the Iwokrama International Centre, which is focused on sustainable use of resources in a protected region of Guyana, and the Amerindian communities of the region.

The Philadelphia Zoo, a private, nonprofit organization, is America's first zoo and its 42-acre Victorian garden is home to more than 1,600 animals, including highly endangered Amur tigers and rare sifaka lemurs. A major educational and recreational attraction, the Zoo welcomes more than 1.1 million visitors last year. For more information, log on to <http://www.philadelphiazoo.org>.

Source: The Philadelphia Zoo Press Release

## **Amazon.com Users -- Don't Forget the AAZK Connection**

Just a reminder that if you regularly (or even occasionally) purchase items on *amazon.com*, there is a way you can also help out the Association while you are doing your shopping. If you go to *amazon.com* from the AAZK Home Page ([www.aazk.org](http://www.aazk.org)), the Association will receive 5% of the cost of your purchase. The *amazon.com* icon is at the bottom right of the AAZK Home Page. And the percentage from purchase of goods is on all items you purchase there - books, music, etc. So next time you want to do a little online shopping at *amazon.com*, get there through the AAZK website and help out your professional organization.

*Institutions wishing to advertise employment opportunities are asked to send pertinent data by the 10th of each month to: Opportunity Knocks/AKF, 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054. Please include closing date for positions available, and when setting these dates keep in mind that because of bulk-mail, most readers do not receive their AKF until the middle of the month or later. There is no charge for this service and fax or e-mail listings of positions which become available close to deadline are accepted. Our Fax is (785) 273-1980; e-mail: akfeditor@zk.kscocmail.com< Listing must be sent as MS Word attachment. To post a position on the AAZK website, have listing to email address above by the 25th of the month for posting on the first day of the following month. We are no longer located at the Topeka Zoo, so please note new address to avoid delays in processing.*

#### **Zoo Keeper I – Santa Ana Zoo, Santa Ana, CA**

The City of Santa Ana has this full-time position currently available. For job flier & required City application, contact: City of Santa Ana Personnel Services Department M-24, 20 Civic Center Plaza, Santa Ana, CA 92701. Tel: (714) 647-5340. EOE [www.santa-ana.org/jobs/](http://www.santa-ana.org/jobs/) **Salary Range:** \$2600 - \$3318/Mo. plus Excellent Benefits Package. Applications must be received by 5:00 p.m., **September 17, 2004.** **Responsibilities:** Prepares food, feeds animals per established diets & schedules; cleans & disinfects exhibits, food & water containers, related facilities & equipment; observes well-being of assigned collection; performs light maintenance work such as raking & emptying waste receptacles; sets up, moves & dismantles animal exhibits; assists w/ care & medical treatment of injured & sick zoo specimens; assists in protecting zoo specimens, facilities & equipment from mistreatment, vandalism & theft; assists in retrieving escaped animals & protecting the public in such instances; handles wild creatures, including delicate and/or hazardous species; explains zoo regulations, answers questions from public; keeps routine records & prepares simple reports; may operate various vehicles; performs other functions as assigned. **Requirements:** One (1) yr. full-time paid experience caring for wild animals in zoo setting; college courses in zoology, biology or related. Must possess & retain valid CDL-C. Rabies pre-exposure inoculations required as condition of continued employment in classifications having direct contact w/ or exposure to wildlife & animals commonly found in zoos. **Desirable:** experience with exotic mammals and birds.

#### **Animal Care Assistant -The Squam Lakes Natural Science Center**

Seeking to fill one full-time assistant animal care position. If interested contact: Dave Erler, Senior Naturalist; (603) 968-7194 ext. #13 or e-mail: [dave.erler@nhnature.org](mailto:dave.erler@nhnature.org)< **Starting Date:** Immediate. **Responsibilities:** The assistant animal caretaker works closely with the Senior Animal Caretaker and Senior Naturalist in providing care for all of the Center's collection of live native wildlife utilized in education programs and trailside exhibits. Responsibilities include daily feeding and cleaning of animal enclosures as well as other weekly, monthly and seasonally related animal maintenance projects. **Qualifications:** Strong interest in native wildlife including snakes. Physically capable of handling and carrying 50 lbs. Ability to work in all weather conditions. Ability to work independently as well as part of a team. **Hours:** Tuesday – Saturday - Hours vary seasonally with weekend day requiring up to 10 hours/day. **Salary & Benefits:** \$8.00/hour plus medical insurance and paid vacation time.

#### **Keepers/Vet. Technicians – Hattiesburg Zoo, Hattiesburg, MS**

The Hattiesburg Zoo has an opening on its Animal Care team. For more information regarding this position please contact John Wright, General Curator, Hattiesburg Zoo, Hattiesburg, MS 39401, (601) 545-4576, email: [jwright@hattiesburgms.com](mailto:jwright@hattiesburgms.com)< **Responsibilities:** This position will be responsible for, but not limited to daily husbandry, exhibit cleaning and maintenance, diet preparation and feeding, documentation, conditioning and training of collection, educational programs, and veterinarian assistance. **Requirements:** We are seeking a career driven, creative, team-oriented individual. Must be high school graduate (college degree preferred) and have previous exotic animal care experience (paid or volunteer). This is a full-time position with state benefits, salary commensurate with experience and qualifications.

#### **Zoo Director - Frank Buck Zoo, Gainesville, TX**

Obtain position description and submit application at the City of Gainesville Human Resources Department, 200 S. Rusk, Gainesville, TX 76240; web address [www.gainesville.tx.us](http://www.gainesville.tx.us)< Located in the small town of Gainesville, TX, the Frank Buck Zoo is seeking a team-oriented individual to serve as zoo director. **Responsibilities:** supervise zoo staff and participate in the day-to-day care and maintenance of our 120+ animals and the facilities. **Requirements:** likely candidates should possess a strong business background (retail business experience helpful), ability to administer a budget, excellent record-keeping and organizational skills, proven grant-writing skills, working knowledge of a zoo and current industry trends, strong marketing and creative skills, ability to manage change and work flexible house, possess strong people and networking skills, and be a team player. Knowledge of the ISIS data entry is preferred, but not required. Requires a Bachelors degree in Business Management or a related field; addition experience or education in Zoology/Biology/Wildlife Management or a related field preferred. The salary range is from \$26,547.00 to \$45,526.00 annually and includes a benefits package. EOE.

**Area Supervisor** – Wildlife Waystation, Angeles National Forest, CA

This position, which is available immediately, will be paid commensurate with experience. Please e-mail cover letter and resumé to [cj@wildlifewaystation.org](mailto:cj@wildlifewaystation.org) < **Responsibilities:** Supervise both section keepers and volunteers in the care, feeding, cleaning and enrichment of an eclectic assortment of wild and exotic animals. (i.e.: bears, primates, large cats, coyotes). **Requirements:** Will work closely with veterinary staff and must have good people and organization skills. Must have prior paid animal experience including a working knowledge of USDA husbandry regulations. TB test and blood panel required prior to beginning work.

*The following two (2) positions are available at the Kentucky Reptile Zoo, Slade, KY. To apply for either position, send a cover letter, resumé, transcript, and at least 2 (preferably 3) references to: Kristen Wiley, Internship Coordinator, Kentucky Reptile Zoo, 200 L&E Railroad, Slade, KY 40376; or email to: [kryptil@pop.mis.net](mailto:kryptil@pop.mis.net)*

**Outreach Program Director** - Kentucky Reptile Zoo, Slade, KY

This is a full time position. **Responsibilities:** will include traveling to and giving reptile outreach programs to locations within 100 miles; scheduling and advertising the programs; and husbandry of the education animals. **Requirements:** include a Bachelor's degree in related field, at least one (1) year's experience in an educational setting, and a willingness to handle snakes and other reptiles. Patience and good verbal communication skills are a must. Programs are given to schools, camps, parks and other community organizations in the area, as well as to field trips at the zoo's facility. The educator may use the zoo's vehicles to travel to programs; a valid driver's license and a good driving record are required. Kentucky Reptile Zoo's programs stress conservation and strive to include snakes and other misunderstood reptiles as part of our important natural heritage. The successful applicant will be passionate about conservation and natural history education. Pay will be based on program fees; 60% of each fee will go to the educator. This position is **open until filled**; please apply immediately if interested.

**Internship** - Kentucky Reptile Zoo, Slade, KY

Students majoring in the biological or natural sciences are preferred. Interns are required to be either college students or recent graduates. Former interns have arranged for academic credit with their institutions. Benefits include experience with one of the most extensive and diverse collection of snakes in the United States, housing, and \$55/week to cover expenses. Interns have been successful in finding zoo keeper positions; over 95% hire rate! **Responsibilities:** The intern will assist in the captive maintenance of the zoo's reptile collection, collect admissions to the exhibit, give interpretive talks and interact with the public, assist with educational outreach programs, and perform other duties as assigned. In addition, the intern will be responsible for the completion of at least one research project related to the field of herpetology. The intern will **not** be involved in the handling of any venomous species. **Requirements:** Desirable qualifications include a willingness to handle snakes and other reptiles on a daily basis, ability to communicate effectively with people, writing skills, orientation to details, and self-motivation. The intern will be required to work Saturday and Sunday, with days off during the week. Students majoring in the biological or natural sciences are preferred. Interns are required to be either college students or recent graduates. Former interns have arranged for academic credit with their institutions. Benefits include experience with one of the most extensive and diverse collection of snakes in the United States, housing, and \$55/week to cover expenses. Interns have been successful in finding zoo keeper positions; over 95% hire rate! Personal transportation is recommended. A valid driver's license is required. Starting dates are flexible, but a minimum of three (3) months covering fall (September-November) is required.

**Volunteer and Intern Positions** - Wildlife Care Association, Sacramento, CA.

To apply, please contact WCA by any of the following methods: Phone: 916-965-WILD; E-mail: [wca\\_volunteers@hotmail.com](mailto:wca_volunteers@hotmail.com) < Online: <http://www.wildlifecareassociation.net>> Please include your name, phone number, e-mail, what you how interested in helping, and any questions you may have. We will answer your questions and send you an application. Wildlife Care Association (WCA) is a non-profit, independent, volunteer-based association located in Sacramento that is permitted to care for wildlife. Concerned citizens and other agencies bring in over 6,000 sick, orphaned, and injured animals each year. With the help of volunteers, staff, and local vets, WCA provides medical services to these animals. Once the animals have recovered from their injuries or illness, or have grown and learned to hunt and fend for themselves, they are released into the wild, giving them a second chance at life. **Opportunities/Responsibilities** –Year-round, we have opportunities for phone volunteers (who provide valuable information to the public) and home rehabbers (require license). During baby-bird season (early April through late August), we have additional positions for everything from facility volunteers (who feed birds, do meds, make food, and clean) and interns (who will also learn about triage, while receiving

school credit) to front desk people (who greet the public) and from transporters (who use their vehicle to get animals to us) to people who do data entry. Many other opportunities exist, so feel free to contact us if you are interested! Additionally, even if you miss the baby-bird season this year, please contact us and we will make sure you have the opportunity to be involved next year! **Requirements:** Vary with opportunity, but usually include an age requirement and a minimum time commitment.

#### **Aviculture Interns - Hawaiian Endangered Bird Conservation Program**

Program is at the Keauhou Bird Conservation Center (KBCC) on the Big Island of Hawaii and the Maui Bird Conservation Center (MBCC) in the island of Maui. For more information on internships at KBCC, please send a resumé, cover letter, and the names and contact information of three (3) references to: Tracey Goltz, P.O. Box 39, Volcano, HI 96785 or fax (808) 985-7034. For more information on internships at MBCC, please send this same information to: Mary Schwartz, 2375 Olinda Road, Makawao, HI 96768 or fax to (808) 572-3574. PLEASE, no phone calls or emails. **Responsibilities:** daily tasks include husbandry duties such as diet preparation, aviary and facility maintenance, behavioral observations of breeding birds, grounds keeping and predator control. **Requirements:** applicant must be able to live with several roommates in a remote area and should show enthusiasm for work with captive endangered Hawaiian birds. Applicant must have a valid driver's license and health insurance. Internships last for a 3-6 month period and interns receive \$20/day stipend plus housing.

#### **Big Cat Internships - Tiger Creek Wildlife Refuge (TCWR), Tyler, TX**

As seen on Animal Planet in "Growing Up Tiger", TCWR is a division of Tiger Missing Link Foundation. **Commencement date:** On-going duration: three (3) months on a month-by-month basis. Summer (May-Aug) Internship Applications due March 1st. For contact information, application packet, additional information, and to see what past interns have to say about Tiger Creek: visit [www.tigercreek.org](http://www.tigercreek.org). Are you interested in learning more about big cats or establishing a career path working in conservation as a zookeeper, a wildlife manager or a veterinarian? You can earn your STRIPES at Tiger Creek and obtain college credit through your college or university at the same time. Right now there are up to three (3) positions available consisting of a six (6)-day work week with a strong commitment for three (3) months. At Tiger Creek you are more than a worker, you are considered a friend and we strive to build long-term working relationships as we know you are the future animal caretakers! Based upon your performance after your training, you may be eligible for any permanent animal care positions that become available. **Requirements:** At least 20 years old and a junior in college. You should be capable of paying attention to details and following safety rules; you must have your own transportation to and from Tyler, TX; and you also provide your own food while here. We provide room; uniforms; materials and curriculum; and indoctrination and safety training. The Intern House has central heat and air, a full kitchen, a shared telephone line for incoming calls, Internet access for email and surfing, a TV with VCR/DVD, even satellite so that you and the other interns can enjoy Animal Planet during your off hours! The intern house is fully furnished and dormitory-style with rooms being shared by two people. All of this and a few rescued dogs or puppies in the backyard...because we want your stay to be as comfortable as possible while here at Tiger Creek. The Tyler/East Texas area has a lot to offer, there is horseback riding available at no cost to our interns, lakes within beautiful parks, movie theaters, numerous local night clubs and plenty of restaurants and much more.

**Environmental Interpretation and Wildlife Care Internship** – Trailside Museums and Wildlife Center, Bear Mountain State Park, Bear Mountain, NY 10911-0427. Contact: Jennifer Verstraete at (845) 786-2701 ext. 278 or 265; email – [elayne.keith-feller@oprhp.state.ny.us](mailto:elayne.keith-feller@oprhp.state.ny.us) Start Dates: Summer internship mid-May through mid-August; Fall internship late-August/early September through early November. Internship is unpaid, but provides knowledge and experience; written evaluation gladly given. Possible course credit if intern can arrange it. Interns will work at least three (3) days a week, including one weekend day. No housing available. We reimburse full payment for required pre-exposure rabies series. **Qualifications:** Enthusiasm, comfortable handling animals, motivated to learn. Must be 18 or older; preference given to college student looking for experience in the care of wildlife and in environmental interpretation. **Responsibilities:** 1) Provide care for permanently injured or orphaned park wildlife (mammals, birds, fish, amphibians and reptiles) in zoo setting. Under the supervision of a Senior Zookeeper will prepare food and diets, maintain enclosures and exhibits, and provide enrichment; 2) Interact with the public answering questions, interpreting exhibits, possibly developing and offering short interpretive talks.

#### **Big Cat Internship** – Wildlife on Easy Street, Tampa, FL

For more information contact Scott Lope at 813-323-5991 or email at [catfotol@aol.com](mailto:catfotol@aol.com) Two (2) positions available for six-month internship at TAOS accredited non-profit big cat sanctuary.

[www.wildlifeoneastreet.com](http://www.wildlifeoneastreet.com)< **Responsibilities** (include but are not limited to): daily husbandry, exhibit cleaning, diet preparation, feeding, operant conditioning and behavioral enrichment for the following species: lions, tigers, leopards, cougars, lynxes, servals, caracals, bobcats, lemurs and other exotic animals. We provide invaluable hands-on experience, on-site housing and utilities, safety training and educational materials. Advanced training and long-term employment opportunities exist for the right candidates. **Requirements:** applicants must be willing to work six days a week, some holidays and follow strict safety guidelines. Hard work ethic and love of animals more important than degree.

#### **Internships** - The Florida Aquarium, Tampa, FL

Internships are available in Animal Health, Animal Programs and Husbandry departments. Internships available year-round for varying lengths of time and can be tailored to the individual student's needs. Internships are unpaid but provide valuable hands-on experience. Interested persons should send resumé to: Human Resources, 701 Channelside Dr., Tampa, FL 33602. For more information visit our website at [www.flaquarium.org](http://www.flaquarium.org)< **Responsibilities:** food preparation, feeding, cleaning enclosures, assist with medical procedures, animal observations, daily record keeping, enrichment activities, assist with training sessions and shows.

#### **Zoo Design Internship** - ZooLex, Vienna, Austria

In 2002 the ZooLex Zoo Design Organization started to offer internships. Carlyn Worstell was our first intern. She finished her internship with the ZooLex Zoo Design Organization in September 2003 and is now working with the Wildlife Conservation Society at Bronx Zoo. We offer internships in Vienna, Austria. Interns who stay for a few weeks only, mainly work on the ZooLex Gallery. Interns who stay longer also complete a research project. You will find more information on ZooLex internships here: <http://www.zoolex.org/intern.html>< ZooLex Zoo Design Organization is a non-profit organization registered in Austria. ZooLex runs a professional zoo design website and distributes a newsletter. More information and contact: <http://www.zoolex.org/home.html>

**The following three (3) internship opportunities are available at the New Jersey State Aquarium** - The New Jersey State Aquarium husbandry department is currently holding open enrollment on all our internships.

#### **Avian Internship**

Interested candidates should submit a cover letter and resumé, transcripts, three (3) letters of recommendation, and an application from our website at [www.njaquarium.org](http://www.njaquarium.org). Please submit materials to: New Jersey State Aquarium, c/o Kyla Fox, One Riverside Drive, Camden, NJ 08103. Become familiar with daily activities involving our colony of African penguins, exotic birds, and reptile collection. **Responsibilities:** Duties include food preparation, exhibit maintenance, and creation of enrichment devices. **Requirements:** Candidates should be comfortable with public speaking and have course work in biology/psychology. Must be able to work outdoors and lift 50 pounds. Interns are required to complete a minimum of 120 hours and must be registered for college credits in either a two or four-year school. Internships may be completed during spring, summer, or fall sessions. All intern positions are on a volunteer basis and are unpaid.

More Zoo vacancies can be seen by visiting:

American Zoo and Aquarium Association - Job Listings  
<http://www.aza.org/JobListings/>

American Association of Zoo Keepers - Opportunity Knocks  
[http://www.aazk.org/aazknew/animalKeepersForum/opportunity\\_knocks.asp](http://www.aazk.org/aazknew/animalKeepersForum/opportunity_knocks.asp)

European Association of Zoos and Aquaria - Vacancies  
<http://www.eaza.net>

Berufsverband der Zootierpfleger e.V  
<http://www.zootierpflege.de>

# AAZK Membership Application

check here if renewal [ ]

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*Other staff & volunteers*

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*Those not connected with  
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**International Members**

**\$55.00 International**

*All members outside U.S. &  
Canada regardless of category*

## Canadian Members

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**\$70.00 Professional**

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Full-time Keepers Only*

**\$40.00 Affiliate**

*Other staff & volunteers*

**\$40.00 Associate**

*Those not connected with  
an animal facility*

**\$65.00 or up - Individuals  
Contributing/Canada**

**\$125.00 or up**

**Institutional/Canada**

*Organizations/Institutions  
(requires Board approval)*

**Library Only**

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*Available only to public  
& university libraries*

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Title \_\_\_\_\_

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Mail this application to: AAZK Administrative Offices, 3601 S.W. 29th, Suite 133 Topeka, KS 66614-2054. Make checks/money orders payable to AAZK, Inc. Must be in U. S. FUNDS ONLY. Membership includes a subscription to *Animal Keepers' Forum*. The membership card is good for free admission to many zoos and aquariums in the U.S. and Canada.



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30th Anniversary  
1974 - 2004



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# ANIMAL KEEPERS' FORUM



The Journal of the American  
Association of Zoo Keepers, Inc.

**OCTOBER 2004**

**Managing Editor:** Susan D. Chan • **Associate Editors:** Kayla Grams, Grand Junction, CO & Mark de Denus, Reid Park Zoo • **Enrichment Options Coordinators:** Dawn Neptune, Utah's Hogle Zoo & Rachel Cantrell, Disney's Animal Kingdom • **Legislative/Conservation Outlook Column Coordinator:** Georgann B. Johnston, Sacramento, CA. • **ABC's Column Coordinator:** Diana Guerrero, Big Bear Lake, CA • **Reactions Column Coordinator:** William K. Baker, Jr., Little Rock Zoo

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**AAZK Executive Director:** Ed Hansen, AAZK, Inc., Topeka KS  
also serves as AAZK Liaison to the American Zoo & Aquarium Association (AZA)

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**AAZK PUBLICATIONS - CONTINUING DATA COLLECTION**

Biological Information (formerly Biological Values), 4th Edition - Jan Reed-Smith, Columbus Zoo

AAZK Enrichment Notebook 3rd Edition - Lee Houts, Folsom City Zoo



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30th Anniversary  
1974 - 2004

## About the Cover.....

This month's cover features "Tinkerbell" a 0.1 Reeve's muntjac (*Muntiacus reevesi*) drawn by Dan Allredge, a Keeper at the Mesker Park Zoo & Botanical Gardens in Evansville, IN. Dan describes "Tinker" as a "sweet, silent partner when he works in the yard. She loves attention and follows him around, but is a very protective mother - in fact a grandmother several times over". This species is native to Eastern Asia in forested areas with heavy underbrush. At a height of 3 ft. (.9m) and weight averaging 20-30 lbs. (9-13kg), they are among the smallest members of the deer family. Their diet consists of grasses, leaves, berries and bark. They have unique elongated upper canine teeth thought to be used for some food tearing and possibly species competition. Their major predators are wild felid and canine species and birds of prey. Instead of being silent as in other deer, the muntjac has an alarm cry that sounds like a dog's bark. Very strong in spite of their small size, the muntjac has a thick, reddish coat and, like the giraffe, has two bony hornlike knobs covered with fur on its forehead. Above these knobs the males have true sharp horns, curved to the rear which they shed year year. Muntjacs live in pairs rather than herds with the female usually bearing two young after a gestation period of six months. They live an average of 10 years. Thanks, Dan!

Animal Keepers' Forum publishes original papers and news items of interest to the animal keeping profession. Non-members are welcome to submit articles for consideration. Articles should be typed or hand-printed and double-spaced. Authors are encouraged to submit their manuscripts on a disk as well as in hard copy form. Manuscripts submitted either on disk or electronically as attachments to an email should be submitted in Microsoft WORD. All illustrations, graphs, charts and tables should be clearly marked, in final form and should fit in a page size **no greater than 5.5" x 8.5"** (14cm x 22cm). Literature used should be cited in the text (Brown, 1986) and alphabetically in the final bibliography. Avoid footnotes. Include scientific name (as per ISIS) the first time an animal name is used. Thereafter use common name. Use metric system for weights and measurements (standard equivalents may be noted in parenthesis). Use the continental dating system (day-month-year). Times should be listed as per the 24-hour clock (0800, 1630 hrs. etc.). Glossy black and white **or** color prints (minimum size 3" x 5" [8cm x 14cm] ) are accepted. Clearly marked captions should accompany photos. Please list photo credit on back of photo. Photographs may be submitted electronically as either JPEG or TIFF file attachments.

Articles sent to Animal Keepers' Forum will be reviewed by the editorial staff for publication. Articles of a research or technical nature will be submitted to one or more of the zoo professionals who serve as referees for AKF. No commitment is made to the author, but an effort will be made to publish articles as soon as possible. Lengthy articles may be separated into monthly installments at the discretion of the editor. The editor reserves the right to edit material without consultation unless approval is requested in writing by the author. Materials submitted will not be returned unless accompanied by a stamped, self-addressed, appropriately-sized envelope. Telephone, fax or email contributions of late-breaking news or last-minute insertions are accepted as space allows. Phone 1-800-242-4519 (US); 1-800-468-1966 (Canada); FAX (785) 273-1980; email is akfeditor@zk.kscoxml.com<

**Deadline for each regular issue is the 10th of the preceding month.**

**Dedicated issues may have separate deadline dates and will be noted by the editor.**

Articles printed do not necessarily reflect the opinions of the AKF staff or the American Association of Zoo Keepers, Inc. Publication does not indicate endorsement by the Association.

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E-Mail Addresses: You may reach Barbara Manspeaker at AAZK Administrative Offices at: aazkoffice@zk.kscoxml.com< You may reach Susan Chan and Animal Keepers' Forum at: akfeditor@zk.kscoxml.com<

**AAZK Website Address: [www.aazk.org](http://www.aazk.org)**

**BFR Website: <http://bfr.aazk.org>**

# *Scoops & Scuttlebutt*



## 2005 International Enrichment Conference Set for NYC

For all of you working on budgets for 2005, Wildlife Conservation Society (WCS) is proud to announce that they will be hosting the International Conference on Environmental Enrichment (ICEE7) in New York City 31 July - 6 August, 2005. The registration fee has been set at US\$250. WCS has made arrangements to co-host with Columbia University, and dorm rates go from US\$45 per person double occupancy to US\$100 per person single occupancy; these prices should include US\$5 per day for breakfast.

The current working theme of this conference is “Unifying the Art and Science of Animal Enrichment”. WCS is making arrangements with a local travel company to assist delegates with sidetrips around New York State — the Adirondacks, the Catskills (NYC’s watershed), the Thousand Islands on the great St. Lawrence River, and ocean fishing off Montauk Long Island (home of “JAWS”). And, there are dozens of zoos to visit and enjoy in the northeast.

Watch future *AKF*'s for more details as they become available. Hope to see you in New York next summer! ---Donald E. Moore, PhD, Director, WCS - Prospect Park Zoo and Co-Chair, WCS Animal Enrichment Program for the ICEE7 Organizing Committee, New York, USA

## Aussie Keepers Hold “Bowling for Bilbies”

The Australasian Society of Zoo Keeping (ASZK) held a “Bowling for Bilbies” event in September to raise funds for Bilby conservation and for the Second International Congress on Zookeeping which they will be hosting on the Gold Coast, Queensland in May 2006 (see insert this issue).



For those not familiar with this “Down-Under” species, the Bilby (*Macrotis lagotis*) is a member of the bandicoot family and are also known as rabbit-eared bandicoots. The Bilby is a marsupial whose pouch opens backwards as so not to get filled with dirt while digging. They have poor eyesight, but their hearing and sense of smell is acute. Their strong forelimbs have long claws making them excellent burrowers. The species’ long, nearly hairless ears are believed to help keep them cool in their hot, arid habitat. Nocturnal in nature, Bilbies are omnivorous, and like the koala, don’t drink water, getting all it needs from its diet of seeds, spiders, insects, bulbs, fruit, fungi and small animals. Females have two young at a time, with the young remaining in the pouch for only 11 weeks. They are weaned at 13 weeks of age. There were once two types of bilbies in Australia (The Lesser and the Greater Bilby); the Less Bilby is now thought to be extinct. The Bilby was chosen by the Commonwealth of Australia Endangered Species Program as a mascot representing all endangered species.

## Grants Committee Seeks Members

The AAZK Grants Committee needs a few new members – now is your chance to become involved! Please contact Jan Reed-Smith at [jrsotter@iserv.net](mailto:jrsotter@iserv.net) or 616-366-1033 if you are interested.

# Coming Events

**25th Annual Elephant Managers Association Conference** - 14-17 October, 2004 in Tulsa, OK. Hosted by Tulsa Zoo and Living Museum. Pre- and post-trips scheduled to Dickerson Park Zoo and Riddle's Elephant and Wildlife Sanctuary (18 Oct.). For more info email: [karendunn@ci.tulsa.ok.us](mailto:karendunn@ci.tulsa.ok.us) or visit [www.elephantmanagers.com](http://www.elephantmanagers.com) and/or [www.tulsazoo.org](http://www.tulsazoo.org)

**International Marine Animal Trainers Association (IMATA)** - 17-22 October, 2004 in Kolmarden, Sweden. For more information: <http://www.imata.org> or email Kirstin Anderson at: [imata2004@stofanet.dk](mailto:imata2004@stofanet.dk)

**ClickerExpo** - 5-7 November 2004 in Orlando, FL. Three days and 40 sessions on operant conditioning and positive reinforcement. Faculty includes Karen Pryor, Thad Lacinak, Ken Ramirez, Kay Laurence, Kathy Sdao and more. In-depth training for all levels of skill, applicable to many species, including: clicker training for medical care; for aggression; using cues as reinforcers; shaping behavior at a distance; developing directional and compound cues; chaining; making training plans; and teaching others. Also current related research. A great resource and learning experience for zoo staffers. To see details or register at [www.clickerexpo.com](http://www.clickerexpo.com) or call 781-784-5354 for more information.

**6th Annual Association of Zoo and Aquarium Volunteer Administrators National Conference (AZAVA)** - 7-10 November, 2004 in Galveston, TX. Hosted by Moody Gardens. For info contact Tim Raeke at [mgvolcoordinator@hotmail.com](mailto:mgvolcoordinator@hotmail.com) or phone (800) 582-4673 ext. 4106.

**Carnivores 2004: Expanding Partnerships in Carnivore Conservation** - 14-17 November 2004 in Santa Fe, NM. Put on by Defenders of Wildlife. For info see [www.carnivoreconference.org](http://www.carnivoreconference.org); or leave a message at (202) 789-2844 ext. 315.

**International Symposium on Construction and Maintenance in Zoos** - 21-24 November 2004 at Zoo Zürich, Zürich, Switzerland. Program, Additional Information, Hotel Recommendations, Registration Forms are available at <http://www.zoo.ch/symposium>

**International Elephant Research Symposium** - 3-5 December, 2004 in Fort Worth, TX. Presented by the International Elephant Foundation and the Fort Worth Zoo. This important symposium will concentrate on the research and conservation needs of captive and wild populations of elephants. Interested persons can also contact Tarren Wagener at [elephantsymposium@fortworthzoo.org](mailto:elephantsymposium@fortworthzoo.org) for additional information.

**6th International Aquarium Congress** - 5-10 December 2004 in Monterey, CA. Hosted by the Monterey Bay Aquarium. Additional information in English, French and Japanese is available online at <http://www.iaac2004.org>

**2nd Annual Crissey Zoological Nutrition Symposium** - 10-11 December 2004 at the North Carolina State University School of Veterinary Medicine. The primary focus of the symposium & the key note speaker this year will be on carnivore nutrition, however; day two of the symposium with

cover all areas of zoological nutrition and therefore all abstracts are welcome. In the spirit of Dr. Susan Crissey, we hope to introduce many students to new areas of nutrition. For more information please check out the website at: <http://www.cvm.ncsu.edu/conted/zoonutrition/>. This website will be updated periodically until the conference.

**Fifth Zoos & Aquariums: Committing to Conservation** - 26-30 January 2005 in Cocoa Beach, FL. Hosted by the Brevard Zoo. This conference will continue to examine and promote the role of zoos and aquaria in supporting *in situ* field research and conservation. Will include keynote speakers, paper sessions, posters. Will be preceded by one-day workshop on North American Conservation Initiatives. For further information please contact Cheri Purnell at (321) 254-9453 ext. 25 or email her at [membership@brevardzoo.org](mailto:membership@brevardzoo.org)

**ClickerExpo** - 28-30 January 2005 in San Diego, CA. Three days and 40 sessions on operant conditioning and positive reinforcement. Faculty includes Karen Pryor, Thad Lacinak, Ken Ramirez, Kay Laurence, Kathy Sdao and more. In-depth training for all levels of skill, applicable to many species, including: clicker training for medical care; for aggression; using cues as reinforcers; shaping behavior at a distance; developing directional and compound cues; chaining; making training plans; and teaching others. Also current related research. A great resource and learning experience for zoo staffers. To see details or register at [www.clickerexpo.com](http://www.clickerexpo.com) or call 781-784-5354 for more information.

**International Association of Avian Trainers and Educators Annual Conference** - 9-12 February 2005 in Atlanta, GA. Hosted by Zoo Atlanta. For more information visit <http://www.iaate.org>

**Fourth Sea Otter Conservation Workshop** - 18-20 March 2005 hosted by Seattle Aquarium, Seattle, WA. Three days of papers, reports and discussion about all aspects of sea otter biology and conservation. Anyone working with sea otters in any capacity is invited to come. Pre-registration is required; discount for early registration (deadline **18 Feb. 2005**). Pre-registration until **11 March 2005**. Info, registration and/or questions contact Dr. Shawn Larson at [shawn.larson@seattle.gov](mailto:shawn.larson@seattle.gov)

**The 7th International Conference on Environmental Enrichment** - to be held in August 2005 in New York City, NY, USA. The conference is hosted by the Wildlife Conservation Society (WCS). Watch this page for details as they become available.

**Second International Congress of Zookeeping (ICZ)** - May 2006 in Gold Coast, Queensland, Australia. Visit website: <http://www.iczoo.org> for latest information.

Post Your Coming Event Here - email to:  
[akfeditor@zk.kscsoxmail.com](mailto:akfeditor@zk.kscsoxmail.com)

## AAZK Announces New Members

### New Professional Members

Philip Gasper, no zoo listed (**Erie, PA**); Jana Savini, **The Philadelphia Zoo (PA)**; Maria E. Moyers, **The National Zoo (Washington, DC)**; Keller Adam Wilt, **Catoctin Wildlife Preserve & Zoo (MD)**; Christianna Fry, **Salisbury Zoo (MD)**; Rebecca McKeel, no zoo listed (**Williamsburg, VA**); Dr. Allyson Walsh, **Lubee Bat Conservancy (FL)**; Heather Hunt, no zoo listed (**Tampa, FL**); Angie Fancher, **The Nature Park (FL)**; Lowell L. Cook, **Municipal Black Bear Habitat (TN)**; Elissa Piorkowski, **Memphis Zoo & Aquarium (TN)**; Cassandra Condon, **Milwaukee County Zoo (WI)**; Erin Hennessy, **Lincoln Park Zoo (IL)**; Janene Issert, **Brookfield Zoo (IL)**; Philip Horvey, **Sedgwick County Zoo (KS)**; Lauren Angel, **Little Rock Zoo (AR)**; Debi Mangrum and Beverly Markwich, **Oklahoma City Zoo (OK)**; Tiffany Barbour, **Tulsa Zoo (OK)**; Mollie Coym, **Houston Aquarium (TX)**; Leo Herrera, **San Antonio Zoo (TX)**; Kate Hatton, **Abilene Zoological Gardens (TX)**; Susan Neill-Eastwood, no zoo listed, (**Tempe, AZ**); Torie L. Cooper, **The Phoenix Zoo (AZ)**; Debra Henley, no zoo listed, (**Marana, AZ**); Laura Mello, **Alameda Park Zoo (NM)**; Jessica Larsen and Benjamin Klopff, **The Living Desert (CA)**; Jil Giel, no zoo listed (**Loomis, CA**); and Patrick A.D. Wise, **The Calgary Zoo (Alberta, Canada)**.

### Renewing Contributing Members

Susan Moy-LaVeau, Keeper  
Lincoln Park Zoo, Chicago, IL

Marilyn R. Lemrow, Patron  
San Diego Zoological Society, San Diego, CA

Joan Rog, Volunteer  
Cleveland Metroparks Zoo, Cleveland, OH

### Renewing Institutional Members

Prospect Park Wildlife Center, Brooklyn, NY  
Dr. Don Moore, Director

### New Institutional Members

Cosley Zoo, Wheaton, IL  
Susan Wahlgren, Director

Walt Disney' Animal Kingdom Library  
Lake Buena Vista, FL

## Panda Population Doing Better in China

Extensive research over the past five years has shown a 40% increase in the endangered giant panda (*Ailuropoda melanoleuca*) population since the 1980's in China, reports *AlJazeera.net..* Environmental groups praised the government for its educational and habitat protection efforts. Officials were quick to caution that the panda still faces a hard battle. "Cutting down trees and road construction are the major causes of decreasing the size of habitats for pandas living outside panda protection zones," said Jin Xuelin - an official with the Shaanxi Provincial Forestry Bureau. *Source: GREENlines Issue #2173 8-18-04*

## Oldest Captive Panda Dies

The oldest panda raised in captivity, Peipei, died at the age of 33 years at a zoo in eastern China, the official *Xinhua News Agency* reported. Peipei died on 13 August from multiple organ failure. *Source: ZooNews Digest #316 9-1-04*



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# 2004 AAZK/AKF Award Recipients

The following are recipients of awards presented at the 30th Annual AAZK National Conference held in Dallas, TX from 26-20 September, 2004. The Lifetime Achievement, Meritorious Achievement, and Environmental Enrichment Awards are selected from nominations submitted to the AAZK Awards Committee. The Certificates of Recognition and Appreciation, as well as the Distinguished Service Plaque are given by the AAZK Board of Directors. The Kathy Kelly Award of Excellence is voted on by the AAZK Board of Directors to honor an individual who has provided long-term dedication and service to AAZK, Inc. The Excellence in Journalism Awards are given by the AKF editorial staff.

## Kathy Kelly Award of Excellence for Service and Dedication to the American Association of Zoo Keepers, Inc.

presents this award to

Lee Houts, Folsom Zoo  
Folsom, CA

in recognition of your service as

Chair of the AAZK Enrichment Committee

Under your leadership, the AAZK Enrichment Committee established the Enrichment Video Library and the AAZK Enrichment Web Site. Your hard work and diligence also resulted in the publication of three editions of the AAZK Enrichment Notebook. In addition you have coordinated many workshops, training, and video sessions for the annual AAZK Conferences. You have also been a continuing and valued contributor to the Enrichment Options column, published in the *Animal Keepers' Forum*.

On behalf of the Board of Directors and the AAZK membership, we offer our heartfelt thanks and appreciation for your dedication to the profession of animal keeping. You have given unselfishly of your time and talents to champion the science of Enrichment within the zoological community, thereby positively impacting the quality of life for captive animals in every facility. You are a credit to the animal keeping profession and your efforts and dedication serve as a shining example of professionalism within the Association.



# Lifetime Achievement Award

presented to

Ralph Harris

Oklahoma City Zoological Park & Botanical Gardens

Oklahoma City, OK

Ralph Harris began his 39-years at the Oklahoma City Zoo as a night keeper. He quickly moved up the ladder, serving as Senior Keeper in Pachyderms; Assistant curator (Foreman) for Big Cats, Bears, Primates, Herpetarium, Birds, Nursery, and Children's Zoo; Mammal Curator; and for the last 19 years, Senior Keeper/Animal Technician Supervisor of the Antelope Department.

Besides being a leading authority on the early breeding of maned wolves, he helped implement and sustain many highly successful breeding programs at the zoo. As Foreman of the Children's Zoo, he was responsible for hand-rearing a variety of carnivores and a rare collection of hoofstock. Ralph extensively video-documented ground hornbill incubation and rearing of young, as well as an assortment of hoofstock births that serve as an invaluable husbandry resource.

As a member of the zoo's Animal Behavior committee, he worked to create successful training methods for shifting cranes and other animals under his care. He was recognized as the 2003 Employee of the Year for his use of karate mats for hoof and joint care in aging hoofstock. Also that year, the Chickasaw Nation honored him by welcoming him as an Honorary Citizen with the name Nan-ok-cha Ah-chu-fa, "one who takes care of animals", in recognition of his dedication and devotion to caring for God's creatures.

He was a proponent of conserving native trees and plants in the zoo, especially regarding new exhibit placement, design and construction. He also assisted the Oklahoma Department of Wildlife conservation with the construction of Oklahoma's first urban wetlands restoration in Stillwater, OK.

He regularly helped with AAZK fundraisers and events. He has served as Research Assistant for the University of Oklahoma and gives lectures for the Oklahoma State University's Zoo Biology classes. He wrote articles on animal husbandry and zoo research projects for the zoo's quarterly publication and participated in media events including a regular spot featuring the zoo and its animals on local television.

Ralph has played an integral role in the development of the Oklahoma City Zoo from a roadside park to the institution it is today. He continued to learn and willingly shared his knowledge with volunteers and keepers. The Oklahoma City Zoo has benefited by one man's lifetime of dedication and commitment to animals, conservation, and the zoo. For this, along with his many accomplishments, the AAZK Awards Committee is honored to present the Lifetime Achievement Award to him.

## Certificate of Meritorious Achievement

presented to

Asaba Mukobi, Oregon Zoo  
Portland, OR

Presented for the development of the Kasese Wildlife Conservation Awareness Project in Uganda. Through conservation education and wildlife awareness projects, children, parents and teachers learn of the wonders and resources that belong to them. Educational props and supplies are provided to participating schools around Queen Elizabeth National Park. The project has grown from 22 schools and one assistant in 2002 to 245 schools with a thirteen-member team today.

## Environmental Enrichment Award

presented to

Alicia Shelly, Columbus Zoo  
Powell, OH

For the development of a formal enrichment program for the zoo's animals, and for assisting on committees to design enrichment protocols for AZA-accreditation and keeper husbandry manuals. Especially noted is the development of special enrichment days at the zoo, coordinating workshops to construct enrichment items, creating enrichment signage for exhibits, writing articles for the membership newsletter and assisting in developing an enrichment coloring book and activities for children.

## Environmental Enrichment Award

presented to

Dawn Manley, Kris Weatherill and Jarrod Willis  
Lindsay Wildlife Museum, Walnut Creek, CA

For their keeper-initiated enrichment techniques. The staff has developed, implemented, and evaluated innovative enrichment techniques for eagles in order for them to make choices, experience different mental and physical challenges and experience change in their captive lives. Also noted was the development of a formal presentation for the public given by the education staff and volunteers.

## Certificates of Appreciation

presented to

*Dallas Zoo - AAZK 2004 National Conference Host Institution*

*Dallas Zoological Society, Dallas Zoo  
for substantial support of the AAZK 2004 National Conference*

## Certificates of Recognition

presented to

*Robert Hayes, Zoological Society of San Diego, for service on the  
AAZK Board of Directors 2001 - 2004*

*Jeannette Beranger, Roger Williams Park Zoo, for service on the  
AAZK Board of Directors 2003 - 2004*

*Patty Pearthree, Cary, NC, for serving on the Grants & Research Committee*

*Linda King, Dallas Zoo, AAZK 2004 National Conference Co-Chair*

*Randi Bolton, Dallas Zoo, AAZK 2004 National Conference Co-Chair*

*Elana Kopel, Dallas Zoo, AAZK 2004 National Conference Treasurer*

*Jeanette Boylan, Dallas Zoo, AAZK 2004 National Conference Program Co-Chair*

*Laurie McGivern, Dallas Zoo, AAZK 2004 National Conference Program Co-Chair*

*Kristin Streebel, Dallas Zoo, AAZK 2004 National Conference PR & Transportation Chair*

*Alex Vasquez, Dallas Zoo, AAZK 2004 National Conference Trips & Hospitality Chair*

*Ann Reams, Dallas Zoo, AAZK 2004 National Conference Budget & Exhibits Chair*

*Sue Thompson, Dallas Zoo, AAZK 2004 National Conference Registration Chair*

*Bonnie Hendrickson, Dallas Zoo, AAZK 2004 National Conference Corporate Funding Chair*

*Sherri Reneau, Dallas Zoo, AAZK 2004 National Conference Volunteer Chair*

*Valerie Beardsley, Dallas Zoo, AAZK 2004 National Conference Graphics & Decoration Chair*

## Distinguished Service Plaque

presented to

**Dallas Chapter of AAZK, Inc.  
AAZK 2004 National Conference Host Chapter**

# Excellence in Journalism Awards

presented to

“Auditory and Olfactory Enrichment Trials in the Cougar, *Felis concolor*”  
*published in 2003 AAZK Conference Proceedings*

**Amanda Ramsey, Keeper**

Nashville Zoo at Grassmere, Nashville, TN

“Flat Puppy Syndrome in Maned Wolves Corrected Through Physical Therapy”  
*published in the July 2003 issue of Animal Keepers' Forum*

**Patricia M. Mulnix, Keeper**

**Darren N. Collelo, Keeper**

**Dr. Marilyn M. Baeyens**

Little Rock Zoo, Little Rock, AR

“HEX Stations for Old World Fruit Bats:  
A Solution to Feeding Territoriality in Captive Flying Foxes”  
*published in March 2004 issue of Animal Keepers' Forum*

**Mark Chag, Keeper**

**Brian Pope, Keeper**

**Erich Trumbly, Keeper**

Disney's Animal Kingdom, Lake Buena Vista, FL

“What's for Lunch? The Evolution of Carcass Feeding Programs at The Toledo Zoo”  
*published in the 2003 AAZK Conference Proceedings*

**Beth Stark, Animal Behavior Manager**

The Toledo Zoo, Toledo, OH

“Notes on Poison Dart Frog Breeding at the Little Rock Zoo”  
*published in the October 2003 issue of Animal Keepers' Forum*

**Jeffrey S. Pfeiffer, Keeper**

Little Rock Zoo, Little Rock, AR

“Providing a Means for Chimps to Pass to Keepers ‘Foreign Objects’ Found in Their Exhibits”  
*published in the August 2003 issue of Animal Keepers' Forum*

**Valerie Beardsley, Keeper**

Dallas Zoo, Dallas, TX

“Chiropractic Care in Animals: An Alternative Approach to Geriatric Care”  
*published in the 2003 AAZK Conference Proceedings*

**Jessica Hoffman, Keeper**

**A.J. Butler, D.C.**

Fossil Rim Wildlife Center, Glen Rose, TX

## Outstanding Cover Art Award

Cotton-Top Tamarin (*Saguinus oedipus*)

**Robert DiCesare**

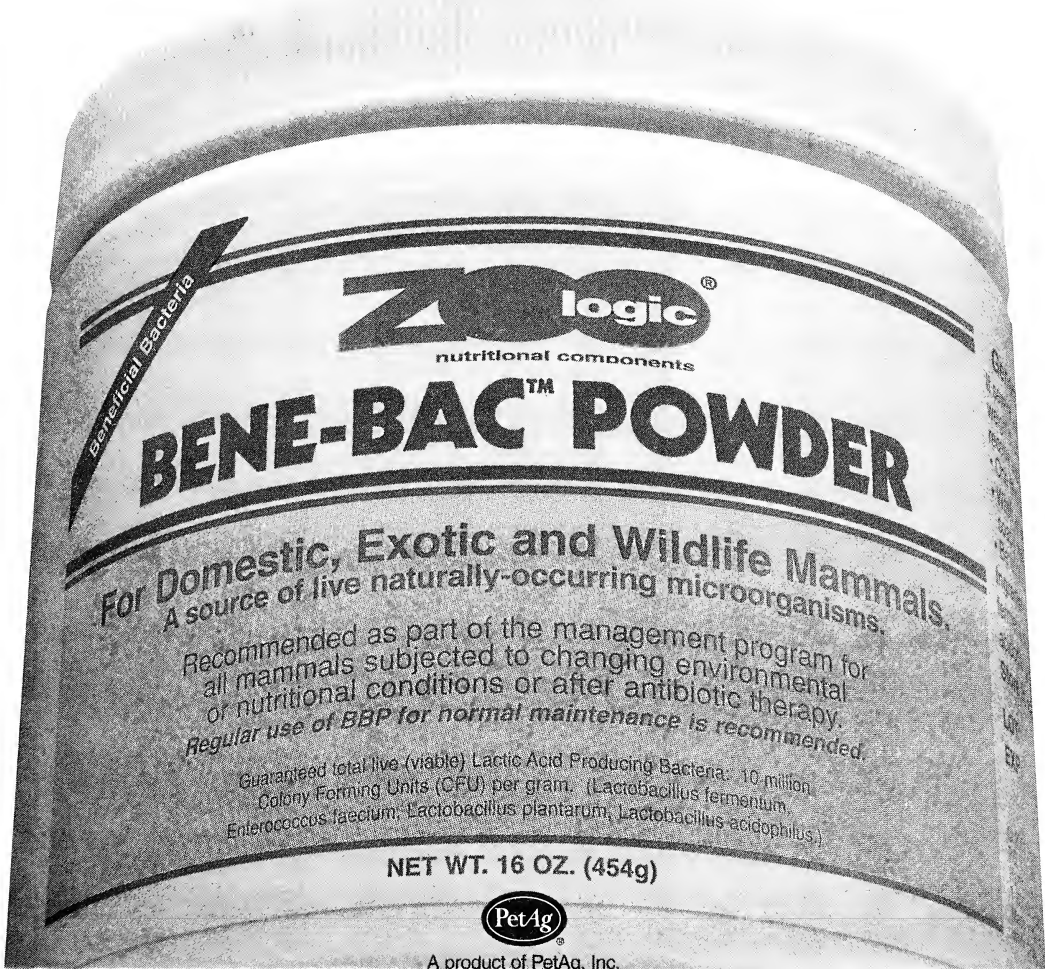
Wildlife Conservation Society, Bronx Zoo, Bronx, NY

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# REACTIONS

## *A Question and Answer Forum for the Zoo Professional on Crisis Management*

*By William K. Baker, Jr., Curator  
Little Rock Zoo, Little Rock, AR*

### **Question**

We have been having problems transporting ammunition during training exercises, do you have any suggestions?

### *Comments*

In the past thirty-five years that I have been shooting, one of the pains I have learned to endure is hauling ammunition back and forth to the firing range. Over the years I have watched my compatriots attempt some extremely inventive ways to transport ammo, some verging on the brilliant, while others approach the ridiculous.

If I'm transporting large amounts of ammo for a Firearms Team, I usually just leave them in the case lots that they arrived in from the manufacturer. For me this is just easier when I load them into a vehicle, since our average shooter burns 125 rounds per range trip. Conversely, I may have a special course of fire in mind and then I have to shift gears.

Probably the best products on the market for organizing ammunition are designed and manufactured by the MTM Company. They make a wide product line designed specifically to manage ammunition of all calibers and gauges for hunters and competitive shooters.

For rifle ammunition I recommend the Case-Guard® R-100 for shooters who require a large supply of ammunition. The R-100 box can be configured to hold rounds as small as 22-250 cal. all the way up to 375 H&H Magnum. This is achieved due to the inner tray being able to rotate to two different heights. Bullets can be stored in either up or down positions for most calibers. When the cartridge is in the down position, the bullet is protected by four plastic "fingers", (my preference). The case is constructed of polypropylene, equipped with a carrying handle, and comes with a 10-year guarantee. It is available in the following calibers:

22-250, .220 Swift, .243 Win., .260 Rem., 308 Win., 6.5 x55 Swed., 7.62 x39, 25-06, .270 Win., .280 Rem., 30-06, .300 Win. Mag., 8-57 Maa, .410 shotshell (rim up), 45-70 Bullet Down.

For shotgun ammunition I recommend the Case-Guard® SF-100 shotshell box, which holds 100 shotshells in two removable trays that hold 50 rounds each. The lid has five shell holders for quick access to cripple loads. This model's design is popular with shotshell reloaders as the trays go easily

from the reloading bench to the box. A heavy duty fold-down handle and latch facilitates easy carry and prevents spills. It is available in the following gauges:

SF-100-12 12 gauge up to 3" and the SF-100-20 20 gauge up to 3"

They can be contacted at the following address:

MTM Molded Products Company  
3370 Obco Court  
Dayton, Ohio 45414

Telephone: 937-890-7461  
FAX:937-890-1747

Or, you can visit your nearest sporting goods store, chances are good that they will carry these products or can order them with little effort.

### **Question**

In one of your recent columns you addressed concerns regarding the exotic pet trade. Are you against private ownership of exotic animals?

### *Comments*

The following is excerpted from the June Reactions column in question:

"So, the question remains, "What should we do to insure animal welfare and public safety when it comes to privately held exotics?" My professional opinion on this is that ownership should be limited in the private sector to zoological, research, and wildlife oriented entities and individuals. They should be USDA licensed and maintain trained degreed zoological professionals on their staff. The uninformed and untrained shouldn't have access to exotic animals, period. Ideally, there should be a mandatory licensing process that regulates all exotic animals that are held outside of zoological facilities and wildlife refuges."

My position on this is I support private ownership of exotics under very specific conditions. I believe that the owner should have a zoological or wildlife background, the appropriate training and skill, and the appropriate licenses. Exotic animals are inherently wild by nature and do not make good pets. As a result, these types of animals are not for everyone. So yes, I support tighter regulation of exotic animals. All you need do is go to your nearest exotic animal sanctuary and you can see the extent of the problem in our country.

**Next Month:** What criteria should be used when selecting staff for an Emergency Response Team?

**If you would like to submit a question for this column or have comments on previously published materials, please send them to AAZK, Inc., 3601 S.W. 29th St., Suite 133, Topeka, KS 66614 Attn: Reactions/AKF**

(About the Author: Since 1985 Bill has been active in the fields of science, zoology, and wildlife management. His education and experience include a B.S. in wildlife management and post-graduate studies in zoology, Lab and Museum Assistant, Shoot Team Leader, ERT Member, Large Mammal Keeper, Senior Keeper, and Zoo Curator at various zoological facilities. His area of research is crisis management in zoological institutions, which draws upon practical experience and training as a Rescue Diver, Hunter Safety Instructor, NRA Firearms Instructor, and Red Cross CPR/First Aid Instructor.)

# ABC'S

## ABC's: Animal Behavior Concerns and Solutions

*A Question & Answer Forum for Animal Professionals*

©2004 by Diana Guerrero, Independent Behavior Consultant  
Ark Animals of California, Big Bear Lake, CA



### **Animal Training 101: Training is Training (Part One of Two)**

#### **Question**

I have been a canine trainer and have recently started working with equines. Can you tell me if they have the same type of drives useful for training as outlined for canines?

#### **Answer**

You are referring to a term used commonly within the domestic animal realm and a belief that I don't subscribe to. First, the term is archaic. In the past this term was used to describe a type of motivation in animals. The *Oxford Dictionary of Zoology* defines *drive* as the psychological "force" that is supposed to lead to physical action. The text explains that the term was abandoned because "physical energy" plays no direct part in the psychological processes. The other reason the term is no longer used is that attempts to attribute a drive to each aspect of behavior led to a proliferation of drives—and difficulties explaining the concept.

Unfortunately every animal realm appears to establish terminology and popular acronyms specific to their industry. Early in this column series ("*Limbo Lingo*") I discussed and listed a few examples. Different terms are often assigned to the same behavior—which can create confusion when you cross industries. This creates difficulty for novice trainers. Many do not understand that training concepts are the same regardless of what they are called, and whether or not the species is domestic or exotic.

Training concepts remain the same whether you are working a highly intelligent animal or a creature with less complex mental processes. Training differences stem from the aptitude of the trainer and his or her ability to identify the best strategies to address a situation or challenge. Successful trainers assess each specific environment, the animal's individual needs, and the species-specific trends to develop the optimal approach.

The environment, health, diet, socializing or lack of, and desensitization of the animal are some training influences. Naïve animals behave and learn differently from veteran animals in the training sense. Domestic animals tend to be easier to work with since they have been selectively bred to work amiably with man.



Although most equines share similar patterns, there are nuances between each group. For instance, an Arabian horse is higher strung than an Appaloosa, and a Grevy's zebra tends to be more aggressive than their other zebra cousins—however they all share equine consistencies that remain true from within the equine realm. An example? Every breed will understand threat postures exhibited from others within the group regardless of other differences.

To understand animals you must read up on the species and the specific breed(s) you are working with. Then observe the animal. Invest time watching solitary individuals and examining animals within a group setting. Observe wild mustangs, either by visiting their range or via filmed footage for more revealing insights. Learn the body language of equines and obtain the resources to assist you—books and tapes are great tools.

What you should observe about the animal are the eyes, ears, nose, mouth, body, and tail. Watch the animal's breathing, movement, and coat, too. Different postures/positions combine with behavior to paint a clear picture of what the animal is communicating. The animal will reveal mood and nuances for you to read and to use to train successfully.

Next you need to define the animal's motivators to properly tackle the issue or to train the animal. Animals under stress from hierarchal challenges will not always respond as the trainer desires—unless the situation is addressed first. Many will not work from food motivation either.

Horse training techniques have only changed fairly recently. To obtain success you have to define your goals first. Are you training an animal for husbandry care? Carting? Dressage or Western riding? Trick behaviors? Jumping? Or are you simply attempting to deal with phobic or destructive behavior? Define your challenge so your question can be addressed completely and so you can develop a strong game plan.

Finally, you should also learn how to identify animal social styles. In my recently released book (written for the general public), I reveal these social styles along with additional techniques for working successfully with animals. You'll find a good bibliography for training and behavior within the book or from my website listed below.

Thanks for your question—and good luck!

**Next month:** This column will include the excerpt on animal social styles so you can use them in your training efforts.

(About the columnist: Since 1978 Diana L. Guerrero has worked professionally with both wild and domestic animals. Guerrero has been affiliated with and certified by a variety of animal programs in the USA and Europe. Based in California, she writes, consults, and leads safaris. Information on her animal career programs, training courses, and her newest books, including *What Animals Can Teach Us about Spirituality* (SkyLight Paths, 2003), are available through her website [www.arkanimals.com](http://www.arkanimals.com). Questions for ABC's should be submitted to Diana by phone at (800) 818-7387, directly through the ABC's questionnaire on her website, via email [zooit@arkanimals.com](mailto:zooit@arkanimals.com), or through regular mail: c/o ARKANIMALS.COM, P. O. Box 1989-215, Big Bear Lake, CA 92315 USA.)

## Zoos vs Sanctuaries – Another Viewpoint

By Geoff Creswell, Emporia, KS  
Former Elephant Keeper

Former African Chimpanzee & Gorilla Sanctuary Manager

The captive animal profession is going through some major growing pains. The realities of captive animal management too often seem peripheral to the agendas of animal advocates and zoo administrators. The point of the profession is to provide for dependent animals. Elephants are often a focal point for debate because they are big, intelligent, obvious - and very expensive to care for properly. Issues that would be minor in the management of small creatures are magnified. When elephant care is politicized, the elephants suffer.

Recently, zoos in Detroit and San Francisco elected to transfer their elephants to non-profit, non-AZA accredited sanctuaries—The Elephant Sanctuary, Hohenwald, TN and the Performing Animal Welfare Society, Galt, CA. I haven't been to these zoos or either of the sanctuaries, but I know enough about the people at the controversial facilities to feel they are dedicated professionals with their hearts in the right place. The AZA official response was immediate and negative, threatening the zoos' professional accreditation. This is troubling to me because traditionally there are times when AZA facilities send animals to non-accredited facilities and dealers. The source of the current controversy may be simply that the animals and sanctuaries have gotten a lion's share of positive media attention and the AZA members didn't ask the organization's permission first.

In a way, this is a conflict the AZA unwittingly created for itself. In 1999, Michael Hutchins PhD, AZA Director for Conservation and Science, made some excellent points in the *Elephant Planning Initiative* - "An institution should not be considered for accreditation if any of its facilities are substandard. If a zoo is unable to adequately provide for the animals' welfare, then it should not hold those animals. Elephants are a focal point for both the public and for animal welfare and animal rights groups, and AZA elephant facilities should set an example of how we care for animals." This position indicated a course of action for zoo directors who feel their facilities are not providing adequate elephant care. As the industry moves to larger and more naturalistic facilities, sanctuaries are a logical step, like the breeding farms historically maintained by some zoos.

I heard once that the only thing two elephant keepers will ever agree on is that a third elephant keeper is wrong. After reading Gregory C. McKinney's September *AKF* piece ("North American Elephant Management: Proven Alternatives") and Michael Hutchins' "Zoo vs. Sanctuary" (published in the August issue of the *AZA Communiqué* (<http://www.aza.org/Publications/2004/08/ZooVsSanctuary.pdf>)), as a former, free-contact knuckledragger who still believes in the benevolent application of that management technique, I found myself wanting to quote Rodney King, "Can't we all just get along?"

McKinney, an independent AAZK member, argues the case for multi-acreage sanctuaries and questions the current rationales for displaying elephants in limited conditions. Hutchins argues for American Zoo and Aquarium accredited facilities. Both arguments begin from a flawed premise - that there is a **best** alternative. They ignore elephant individuality. Elephant management techniques must prioritize the individual animal's needs. Each elephant, facility and staff are different. Emphasizing only the extreme positives and extreme negatives of either option solves nothing. Whether the priority is the elephant's spirit or spermatazoa, elephant care **takes what it takes**. The situation calls for pragmatism.

A primary problem is that the USDA has no regulations specific to elephant management. Current vague federal regulations are adequate if appropriately enforced, but enforcement depends on the inspectors and the inspectors don't or can't always enforce the standards as written. In the past, the

USDA has accepted AZA accreditation as a seal of approval for an institution's elephant care, but the AZA has no authority beyond its dues paying members, and does not have a sterling track record when it comes to self-regulation. The result is a void in regulatory jurisdiction. Perhaps the USDA needs to adopt and enforce specific regulations for elephant care similar to those already in place for marine mammals and non-human primates.

All the parties involved have evolved over time. Carol Buckley of The Elephant Sanctuary, Hohenwald, TN, and Pat Derby of the Performing Animal Welfare Society, Galt, CA were performing animal trainers. The earlier AAZPA's Newsletter (now *AZA Communiqué*) was historically a shopping list of surplus animals for zoo directors. Exploitation is a value-loaded term, but anyone who makes a living displaying or saving captive animals is technically involved in the process.

Adequate minimum space is not something that can be scientifically determined and mandated. The sanctuaries provide acreage, but at this stage they are small in comparison to wild elephant territories. They remain no more than large holding exhibits. Sanctuaries should reach the scale envisioned by Patty Strowbridge-Gough, African Elephant Research & Survival Ranch, in the mid-80's. Strowbridge-Gough foresaw the need for a home for surplus bulls, non-reproductive cows and other elephants. She lobbied for the creation of a multi-thousand acre fenced reserve where surplus African elephants would have enough space to live restricted natural lives in a warm climate, while allowing options for mechanical restraint and veterinary intervention. Too many AZA facilities offer cramped outdoor facilities and smaller indoor facilities. In climates where the winters are harsh the elephants are subjected to prolonged unnatural stresses of temperature and substrate. It is hard to justify the practice.

The existing sanctuaries are no threat to AZA breeding protocols. From what I understand, the elephants they house are confiscations, court settlements, donations - not prime reproductive individuals. Plenty of AZA zoos have aging, barren elephant cows that should have been bred and were not. Robert Wiese, Director of Animal Collections at the Ft. Worth Zoo did a study that concluded, given current trends, in 50 years there will be only a handful of female African elephants of breeding age left in the US. This clearly speaks to the fact that the entire profession of rugged individualists, failing to incorporate the circus community breeding initiatives and only recently codifying standards that require facilities to prioritize elephant breeding, effectively drove the elephant bandwagon until the wheels came off. There is no longer room for territorialism. New standards are welcome, but should not have been necessary. Any facility that houses elephants but does not actively participate in reproductive programs, and fails to provide superior facilities which factor in solutions to foreseeable emergencies, is derelict in their responsibility to the species.

Mckinney makes an excellent point that applies to both urban zoos and rural sanctuaries – “Rather than upgrade minimum requirements of care every few years when it becomes convenient or economically feasible, ensuring that the worst exhibits fall within the acceptable range; rather than continuing to make insignificant changes to existing inadequate facilities and contributing resources to inconsequential efforts; rather than putting off for the future something that is necessary and overdue, why not begin today to address the real issues which face the African and Asian elephants in captivity? Instead of concentrating on alternatives to insufficiently and incompletely provide what is lacking in the elephant's environment, why not **provide** what is lacking in the elephant's environment?”

The AZA Accreditation Standards (<http://www.aza.org/Accreditation/Documents/AccredGuide.pdf>) require that all protected-contact elephant programs must have a non-weather dependant Elephant Restraint Device (ERD), but the AZA Accreditation Commission does not enforce this standard. The practice of “grandfathering in” derelict facilities needs to end. Until the AZA mandates that all accredited facilities meet minimum AZA standards regarding elephants, the AZA can't legitimately criticize the sanctuaries.

To this point the sanctuaries have been successful in caring for elephants and raising funds and public awareness. Hutchins' perspective is that AZA accreditation and predictable funding assures competent care. No facility can truly guarantee funding or expertise or immunity from mistakes or

natural disasters, so the AZA re-inspects its members regularly to assure they are still viable. The National Zoo, with the federal government's financial backing and all the expertise of the AZA just a few miles down the road, was recently the center of multiple animal care scandals. In one case, because of a federal loophole, the National Zoo apparently avoided USDA inspection jurisdiction and neglected routine tuberculosis tests. An elephant euthanized for chronic unresolved foot problems turned out to be loaded with bovine TB, a completely avoidable risk to staff, public and other elephants.

Elephant management is not hard science - it is an odd mix of child psychology, penal incarceration and reciprocal behavioral modification. All the public has to do is turn on the Discovery Channel and watch a program on wild elephants to see whether or not the local zoo or sanctuary is providing benevolent stewardship. Everyone needs to accept the consequences of natural selection and the limitations of captivity that can accelerate that process. The sanctuaries are not necessarily a solution to all the problems faced by captive elephants. It remains to be seen if the facilities can address the long-term needs of the resident elephants. A peaceful sanctuary set up could be devastated by an aggressive cow. Some free-contact facilities are providing high quality lives and contributing solid reproductive research and groundbreaking herpes treatment protocols.

There are three facilities with African elephant cows within 100 miles of where I live. To the best of my knowledge two facilities have never made an effort to breed them. Instead of dividing and separating endangered species, regional facilities that consolidate populations and financial resources make good sense. Rides do not necessarily demean elephants and free-contact is not inherently evil. Some circus elephants thrive and reproduce. Graduating from an AZA elephant management school does not guarantee competence. Unlimited freedom of movement may also become freedom to avoid necessary veterinary intervention. Not every SSP-sanctioned breeding exchange is a match made in heaven. It makes sense to cultivate alternatives— from freezing genetic material to establishing a cooperative involvement in sanctuaries. Ten years ago the volcanic debate was over handling strategies. Neither free- or protected-contact is inherently superior. Everything depended on implementation. Incompetent free-contact is abusive. Incompetent protected-contact institutionalizes neglect. The same can be said for a zoo or sanctuary with inadequate facilities.

Some transition from zoo display to sanctuary is inevitable just as was the transition from free- to protected-contact. Just as protected-contact elephant management gained momentum to avoid insurance liability and to halt a negative public image of free-contact techniques, I believe that sanctuaries will become mainstream as public scrutiny of AZA facilities that isolate elephants increases. Still, captivity is still captivity no matter how big the facility. Virtually no facilities, organizations or consultants advertise their failures. Temperate sanctuaries are not the perfect solution for tropical animals. More public and private sector elephants are nearing "retirement age". While there have been very successful programs, some limitations of historic management practices are becoming evident, and it goes without saying that zoos and sanctuaries are in competition for funding and the public's good will. There is no real moral high ground here. Elephants are not inanimate property and warrant far greater respect than they generally get. At this point in time, the best anyone can do is mitigate the unnatural risks caused by captivity. The problem is not new sanctuaries. The problem is archaic, anthro-centric thinking. Where does anyone get the authority to euthanize an elephant after years of foot deterioration on hard concrete when there is another option that can be tried? Rogue directors, experts and activists bicker about who has authority over these elephants. It would seem that it would be best for all parties to cooperate to create viable options and provide the highest quality elephant care possible - wherever it works best.

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*(Editor's note: The Viewpoint Column offers readers an opportunity to express their opinions on topics related to the profession of animal keeping. It is not a forum for expressing disagreements with employers about labor-related issues. Opinions expressed in this column do not necessarily reflect those of AAZK, Inc. or Animal Keepers' Forum. Publication of opinions in this column does not constitute endorsement by AAZK, Inc. or Animal Keepers' Forum. Materials submitted are published at the discretion of the editor.)*

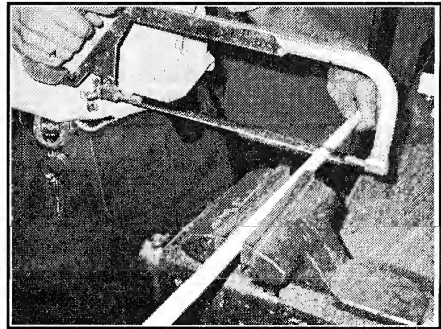
## **Tools of the Trade: ‘Meat Sticks’ Made Easy**

*By Angela Binney, AAZK, Inc. ABMC Member  
& Animal Keeper, Disney’s Animal Kingdom*

Keepers at Disney’s Animal Kingdom (DAK) were charged with the task of implementing a method to safely deliver reinforcement during felid husbandry training. ‘Safe’, in this situation, was defined as ‘no hands touching the mesh barrier between the keeper and the cat’. Keepers brainstormed and tried many options, including heavy rubber gloves, spatulas, rolling meat under mesh walls, and throwing meat through a 2” x 2” mesh before deciding to use a stick, similar to those that have been used by big cat trainers for years. DAK keepers modified this concept to meet their needs in a protected contact program (they made it shorter). A stick allowed the keeper to place a meatball or other small tidbit on it and present it to the animal through the mesh while maintaining a safe distance.

The ‘meat stick’ needed to be of a durable material that could be properly disinfected between sessions. The final product has been used successfully since 1998 and many inquiries have been made by keepers at other facilities about where to buy these sticks. This article will outline the steps keepers used to make their ‘meat sticks’ and how to use them effectively.

A fiberglass rod works well due to its durability (plastic cracks too easily to use with large carnivores). Meat sticks at DAK have been made from Hot Shot™ brand fiberglass rods and from show sticks used for moving ranch animals. These are readily available from a feed store or the Nasco™ catalog (or [www.nascofa.com](http://www.nascofa.com)) and they usually come with a golf style grip on one end. The sticks can be made in any length (if personal space between the trainer and the cat is an issue, a longer stick may be useful). In this example a 36.5” [0.9m] stick is used to make three meat sticks (~1’ [0.3m] each).

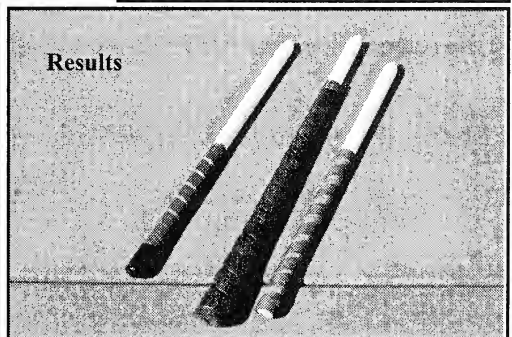
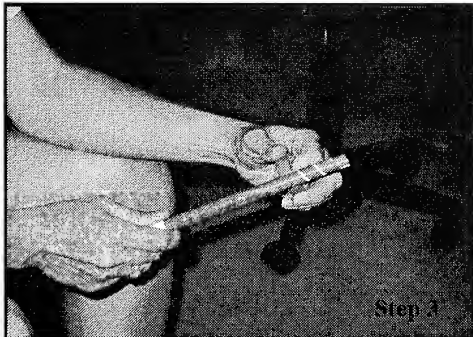
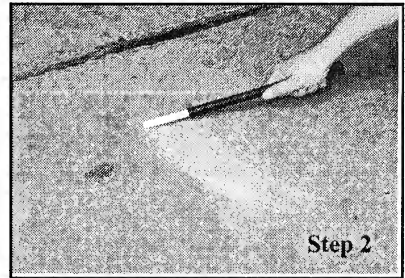


**Step 1** (top right): cut rod into 3 sections

**Step 2** (right center) : sharpen each stick

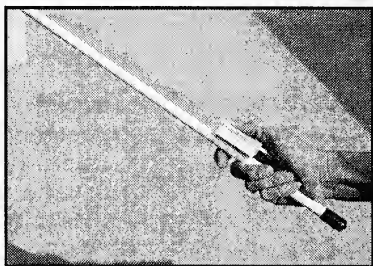
**Step 3** (lower left): wrap handle ends, if needed

**Results** (lower right): The result is three 12” long  
[~30.5cm] ‘meat sticks’



The first step is to cut the rod into the desired length (in this example it is cut into three sections). A table vice is handy to hold the rod steady, while a hacksaw makes cutting it simple. Once the rod is cut, one end of each stick can be sharpened to a dull point by rubbing it back and forth on a rough surface rotating to make a round point. Concrete or a file works well.

One end of this rod had a golf-style grip already, but the other two need something to give traction so it does not slip easily out of the hand. Here electrical tape is used to wrap the handle. A clicker can be attached to the handle if this is used as a bridge (see photo at right).



**Meat stick with clicker**

Maintenance of the stick only involves disinfecting (a stiff brush works well on the grip) and watching for cracks or splinters. If the end cracks or splinters, filing it on the concrete will help keep the edges smooth.

Prior to using the meat stick for new or routine training, some 'free feeding' sessions will help acclimate animal and trainer to the new tool. The food item should be presented at the surface of the mesh (not through the mesh), so the trainer can control the speed and disposition that the animal approaches. An overzealous animal may try to lunge at or bite the stick at first (do not over sharpen it for this reason). Only allow the animal to take the meat in a calm, non-aggressive manner. If the



**Free feeding 0.1 tiger in the holding area**

animal is aggressive toward the meat stick, it may need to be introduced more slowly by rolling meat balls under the mesh while holding the stick nearby. If possible, point to the meat with the stick, giving the impression that the stick is associated with the reinforcement. Feeding with the meat stick held low to the ground may also help curb aggressive tendencies. Once the animal is calm, approximate using the stick to deliver reinforcement. A bridge will help communicate to the animal when it is approaching correctly.

In addition to being a safe alternative to 'hand feeding', the 'meat stick' has a few other advantages. The stick increases the distance between the trainer and animal. For animals

that show fear or aggression of people, a longer meat stick often helps decrease the occurrence of these behaviors. It can help decrease intimidation or the aggressive reaction that often happens with a flat hand against the mesh (due to the hand coming at their face). The meat stick is not limited to use with carnivores. Any food item that will stay on the stick is appropriate, which presents options for use with other taxa.

*Photos provided by the author*

# **Block These Dates ! 7-11 May 2006**

The Australasian Society of Zoo Keeping (ASZK) wishes to invite you to the **2<sup>nd</sup> International Congress on Zookeeping (ICZ)** to be held on the **Gold Coast, Queensland, Australia.**

Hosted by ASZK in conjunction with the following Zoo Keeper Associations: ABWAK, (Britain), AAZK, (United States), AICAS, (Spain), AFSA, (France), BdZ, (Germany) and De Harpij, (The Netherlands). Further information can be obtained by visiting <http://www.iczoo.org> or to receive regular updates subscribe to ICZ\_News-subscribe@yahoogroups.com or write to ICZ Conference Convenor c/- ASZK PO Box 248, Healesville Vic, AUSTRALIA 3777.

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# Legislative/Conservation Update

Compiled by Georgann Johnston  
Legislative Advisor  
Sacramento, CA



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## U.S. Fish & Wildlife Service Establishes New Hunting/Fishing Programs in National Wildlife Refuge System

The USFWS is adding new hunting and fishing programs on four national wildlife refuges in Alabama, Illinois, Louisiana, and South Carolina, and six Wetlands Management Districts in North and South Dakota as part of its annual Refuge-Specific Hunting and Sport Fishing Regulations. With this action, the Service now manages 325 public hunting programs and 282 public fishing programs on units of the National Wildlife Refuge System. At the same time, the Service is expanding recreational hunting and fishing opportunities on seven refuges in Nebraska, Texas, Tennessee, Indiana, Louisiana, Georgia, and South Carolina.

In 2003, there were 2.2 million hunting visits to national wildlife refuges and 6.6 million fishing visits. By law, hunting and fishing are two of the six priority wildlife-dependent recreational uses on national wildlife refuges, and individual refuges are encouraged to provide opportunities to hunt and fish whenever they are compatible with the refuge's conservation goals.

"Today's action speaks to the success of our conservation efforts," Interior Secretary Gale Norton said. "The ability of the USFWS to add and expand hunting and fishing programs means that our wildlife and habitat conservation efforts are working." *Source: USFWS Press Release 30 August 2004*

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## Sage Grouse Habitat Protection In the Works

The U.S. Department of Agriculture has offered \$2 million to help private land owners in four Western states protect the habitat of the sage grouse (*Centrocercus urophasianus*). The bird, about the size of chicken, has seen its numbers thin as its territory gets crowded by homes, cattle, and oil and natural gas wells.

The money will be available under the Grassland Reserve Program, which gives ranchers and farmers dollars and technical help in protecting grassland and shrub land. Those areas include the sagebrush where the birds live. The funding might help protect tens of thousands of acres, said a USDA spokesperson "It's a small slice of money but a step in the right direction", he said.

The USDA announcement said sage grouse numbers had fallen by 90% in 20 years. Estimates of the current population vary but generally range from around 140,000 birds to 250,000 or more. Experts say there were as many as two million when in the early 19th century, when Lewis and Clark explored the West. Environmental groups have asked the Interior Department to place the birds on its endangered species list. Doing so could sharply restrict use of land in 11 states where the birds live. About 28 percent of that land is privately owned.

Some state representatives were skeptical about how much can be done for the sage grouse with the \$500,000 that Colorado, Idaho, Utah, and Washington will each get to encourage private voluntary efforts. "This is going to be a token amount in terms of actually causing change on the ground," said Peter Aengst, an energy policy analyst for The Wilderness Society in Bozeman, MT. He said stronger government action is needed, such as protecting nesting areas in spring and summer so loud noises from oil and gas wells do not frighten the birds away from their eggs. *Source: Environmental News Network Online 31 August 2004*

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### **Rare Finch's Nest Found in Wyoming**

A rare nest of brown-capped rosy finches (*Leucosticte australis*) was discovered recently in a crack in a cliff high in the Snowy Range. Little is known about the species and only six or seven such nests have ever been found, according to David McDonald, associate professor in the University of Wyoming Department of Zoology and Physiology. "No vertebrate in the lower 48 states nests higher than a rosy finch," McDonald said. "They are way up in the mountain tops, above the tree line, even in winter. They are tough birds."

A bird watching group of about 20 volunteers from around Wyoming made the unexpected discovery. The group noticed a bird flying several times in and out of a spot on a cliff. From the base of the cliff they saw the nest crack and then reported their finding to McDonald.

McDonald directed a climb to the nest with funding from the National Geographic Society. The chicks were banded and blood samples were taken for genetic analysis by undergraduate and graduate researchers. "Wyoming is the only state with two breeding species of this type of bird — the black finch and the brown-capped," McDonald said. "They nest in cliffs at a minimum of 10,000 feet and have a pretty restricted distribution."

Zoologists are interested in many basic and applied biology questions about the species, including its range, mating behaviors, how they disperse and where they re distributed. This find may help find answers to some of those questions. *Source: New York Times 2 September 2004*

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### **Avian Flu Is Back and Attacking Mammals**

The H5N1 virus, commonly called "avian flu" is mutating to more easily infect mammals, according to a research study reported in July 2004. Ducks, chickens and mice were experimentally infected with different strains of the virus taken from healthy ducks. Generally, the infected ducks had no problem fighting off the disease but the chickens and mice did not fare as well. The mice, in particular, lost weight and the use of their limbs when exposed to 2000 and 2001 strains of H5N1. Researchers also found some evidence that the mutated strains originally came from pigs kept in close proximity to waterfowl in areas of China.

Previous research by other scientists came to differing conclusions, said a spokesperson for the International Society of Infectious Disease. "The experiments with mice may not have direct relevance to the evolution of human pathogens." However, with H5N1 recurring in many Asian countries despite aggressive eradication efforts, health officials are increasingly anxious.

Researchers in the Netherlands also reported recently that H5N1 has been found to infect domestic cats and that felines can transmit the virus to other cats as well - and perhaps to humans. While the primary outbreaks of the disease remain centered in China and Southeast Asian countries, the potential for the virus moving around the world, affecting multiple species in its path, is anticipated in the next two years. *Sources: Science Magazine 3 September 2004; Animal People News July/August 2004*

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### **China Seizes Smuggled Antelope Horn**

Officials in China's Guangdong province have seized 2.365 tons of antelope horn, reports the *People's Daily Online*. Police believe some of the 8,100 antelope horns came from Saiga antelope (*Saiga tatarica*) listed as endangered under the Convention on International Trade in Endangered Species (CITES). Saiga horn is an often-used ingredient in traditional Chinese medicine for treatment of fever, stroke, headache and dizziness. *Source: GREENlines Issue #2178 8-25-04*

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### **Ebola Outbreak Feared in Gorilla Territory**

Scientists fear that an ebola outbreak may be the cause of the sudden disappearance of many endangered Western lowland gorillas (*Gorilla gorilla gorilla*), reports *Innovations Report*. Forty-

five groups of gorillas (each with an average of eight individuals) were once normally observed in one clearing in Congo's Odzala National Park, the number since May has plummeted to only nine groups. The outbreak has not been confirmed, but scientists called for quick action to address the problem. "A study published in the journal *Nature* last year suggested that when an ebola outbreak affects a given area, more than 80% of all great apes living in that area die of the disease." *Source: GREENlines Issue #2182 8-31-04*

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### **Mexican Spotted Owl Critical Habitat Designated**

The U.S. Fish and Wildlife Service announced Tuesday that it had designated 8.6 million acres as critical habitat for the threatened Mexican spotted owl (*Strix occidentalis lucida*), reports the *Arizona Daily Sun*. The designation covers Arizona, New Mexico, Colorado, and Utah. Conservationists objected to the designation because it cut about four million acres from the proposed habitat. The Service said that it excluded tribal and military land as well as wildland-urban interface where thinning projects are planned to reduce the threat of wildfire. "They've gone out of their way to just hand the forest over to the timber industry. They are excluding millions of acres of mature and old growth forest and leaving it open to logging," said Kieran Suckling, Executive Director of the Center for Biological Diversity, an Endangered Species Coalition member group. *Source: GREENlines Issue #2184 9-2-04*

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### **New Bird Species Discovered in the Philippines**

*BBC News* reported that an expedition of Filipino and UK researchers have discovered a previously unidentified rail living by a stream in the Calayan forest on a remote island in the northern part of the Philippines. According to the researchers, the Calayan rail (*Gallirallus calayanensis*), a flightless bird, probably is limited to no more than 200 pair because of habitat loss. *Source: GREENlines Issue #2173 8-18-04*

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### **Native Americans Protest Wolf Delisting**

Gray wolf (*Canis lupus*) advocates rallied outside Bemidji State University in northern Minnesota to protest the U.S. Fish and Wildlife Service's plan to remove Endangered Species Act protections for the wolf across the entire Eastern United States, reports *Minnesota Public Radio*. Tom Goldtooth, director of the Indigenous Environmental Network, says many Indian tribes, especially in the Great Lakes region, have a deep spiritual relationship with the wolf. "Part of their essence within their clan — of who they are, their relationship to the earth and to each other and to the cosmos — is connected to the wolf, their brother," said Goldtooth. Minnesota's Wolf Management Plan would maintain a minimum statewide population of 1,600 wolves (current population estimates are at 2,500). It would allow anyone to kill a wolf if it's in the act of stalking or attacking livestock or pets. Farmers in the lower two-thirds of the state would be allowed to kill wolves even if there's no sign of threatening behavior. Karlyn Berg, of Help Our Wolves Live (HOWL) and the Humane Society of the U.S. - both Endangered Species Coalition member groups - worried that "the state plan will turn back the clock on the gray wolf." *Source: GREENlines Issue #2184 9-2-04*

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### **Judge Revokes Mine Permit in Panther Habitat**

A federal judge revoked a permit for a limestone mining operation in the heart of endangered Florida panther (*Puma concolor coryi*) habitat, reports the *Associated Press*. The National Wildlife Federation sued to stop the development saying federal agencies violated the Endangered Species Act and the Clean Water Act. "It has been a problem that these agencies put blinders on," said John Kostyack, NWF attorney. "We know what the panther needs. It needs more habitat." Fewer than 100 panthers remain in Florida. The breeding population is below 50, the minimum required to sustain the population. Considered one of the world's rarest mammals, the surviving panthers now are found in the wild only in a handful of counties in southwestern Florida. *Source: GREENlines Issue #2177 8-24-04*

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### **Off-Course Whoopers Return to Wisconsin**

Three of the endangered whooping cranes (*Grus americana*) that veered off course in their migration back to Wisconsin this spring finally made it back to Wisconsin in August, reports the *Associated Press*. The whooping cranes that are part of an effort to return a migrating population east of the Mississippi were taught to migrate behind ultra-light planes. On their return migration from Florida to Wisconsin, bad weather and human interference caused them to veer off-course and end up in

Michigan. Five of the cranes still remained in the wetlands of Michigan. The three whoopers who returned to Necedah National Wildlife Refuge in WI had to make their way around the southern tip of Lake Michigan because the cranes won't fly over large bodies of water because they can't see land. *Source: GREENlines Issue #2177 8-24-04*

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### Condor Chick Found Dead

*The Associated Press* reported in late August that an endangered California condor (*Gymnogyps californianus*) chick was found dead 20 feet below its nest in the Los Padres National Forest. The chick, one of five in the wild, was believed to have swallowed trash including a bottle top. There are 101 California condors in California, Arizona, and Baja California. *Source: GREENlines Issue #2177 8-24-04*

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### Sea Turtle Updates

- Conservationists meeting in Malaysia are calling for urgent action to save an endangered species of sea turtle from extinction, reports *ABC Online*, Australia. Experts say a massive effort is needed to protect the remaining Pacific nesting grounds of the leatherback (*Dermochelys coriacea*), the largest and most threatened of the world's turtles. Only forty years ago, leatherback turtles struggled up Malaysian beaches in their tens of thousands to lay eggs. Yet two years ago, at one major nesting site only three came ashore and none made a nest. Malaysia has set up a sanctuary for endangered leatherback sea turtles, according to *United Press International*. The sanctuary will protect 60 hectares of land off the east coast state of Terengganu. This is one of only ten nesting sites left in the world. Destruction and degradation of their feeding and breeding grounds, as well as excessive egg collection, have contributed to the sharp decline in sea turtle populations. *Source: GREENlines Issue #2175 8-20-04*

- This year may mark the lowest number of endangered sea turtle nests recorded in Florida, reports the *Sun-Sentinel*. The 2004 sea turtle nesting season is winding down into a significantly low year for turtle-reproduction on South Florida beaches, biologists say. The downturn is seen in the nesting of loggerhead sea turtles (*Caretta caretta caretta*). Some unknown environmental condition could be reducing turtle-hatchling output. Or, Florida might be seeing the bottom end of natural, cyclical highs and lows in turtle nesting. *Source: GREENlines #2171 8-16-04*

- Endangered green and loggerhead turtles have found safe-haven on the coast of Lebanon, reports *Middle East Online*. Volunteers work off the coast of Mansouri in southern Lebanon to protect the sea turtle nests once the eggs are laid. They place protective wire over the nests to prevent predation by dogs, sea birds and crabs and then remove the cover once the hatchlings are ready to make their journey to the sea. "To get to the sea is a real adventure: they determine where it is by the reflection of the light from the moon and stars on the water. Any artificial light disorients them. If they are too slow reaching the sea, they risk being fried by the sun, which is why we open the nests in the evening," said Mona Khalil, one of the volunteers. *Source: GREENlines Issue #2186 9-7-04*

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### Zoos Oppose Prairie Dog Poisoning

The American Zoo and Aquarium Association (AZA) expressed concerns about the planned poisoning, trapping and shooting of black-tailed prairie dogs (*Cynomys ludovicianus*) at Buffalo Gap National Grasslands in South Dakota, according to a report on *U.S. Newswire*. A new plan by the State of South Dakota, the United States Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), the U.S. Forest Service, and the U.S. Fish and Wildlife Service (USFWS) would destroy prairie dogs on habitat essential to the recovery of the endangered black-footed ferret (*Mustela nigripes*). "Accredited zoos and their partners have worked hard and invested millions of dollars for over a decade to help recover the endangered black-footed ferret. There are no other sites in the world that currently support such a large, viable population of black-footed ferrets," said Dr. Michael Hutchins, Chair of Conservation and Science for AZA. *Source: GREENlines Issue #2180 8-27-04*

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### CITES Conference Will Consider New Rules for Trade in Species

"The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is meeting Oct. 2-14 in Bangkok, hosting representatives of 166 member governments," according

to the *Associated Press*. According to the UNEP, "the conference's most commercially significant proposals include recommendations to add the humphead wrasse (*Cheilinus undulatus*), a large reef fish from the Indian and Pacific oceans, and the great white shark (*Carcharodon carcharias*) to the international trade permit list." The conference will consider proposals for the conservation of the African elephant, the white rhinoceros, the bald eagle, the minke whale, the yellow-crested cockatoo, the lilac-crowned parrot, Asian turtles and tortoises, the ramin timber tree, the Chinese yew and other medicinal plants, and many other species.

In a related story, as delegates from 166 countries prepared to head to Bangkok, Thailand, World Wildlife Fund released its biennial list of ten of the world's most in-demand species bought, sold, smuggled, killed or captured for the global marketplace. According to a World Wildlife Fund press release, the ten most wanted species list includes the tiger; the asian elephant; the great white shark; the Irawaddy dolphin; the humphead wrasse, a tropical reef fish; ramin, a tropical hardwood from Indonesia and Malaysia; the pig nosed turtle found in Papua New Guinea; the yellow-crested cockatoo, an exotic looking parrot from Indonesia; and the leaf-tailed gecko from Madagascar.

Source: *GREENlines Issue #2187 9-8-04*

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### **Vietnamese Monkey Facing Extinction**

The *BBC News* has reported that only 300 Delacour's langurs (*Trachypithecus delacouri*) are alive today, and experts fear they could be completely extinct by 2014 if the current rate of decline continues. The monkey is being hunted for the Chinese traditional medicine trade. The hunting has forced the monkey into areas of steep limestone cliffs that give them a little protection from poachers.

Source: *GREENlines Issue #2181 8-30-04*

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### **Oregon Creates Wolf Plan**

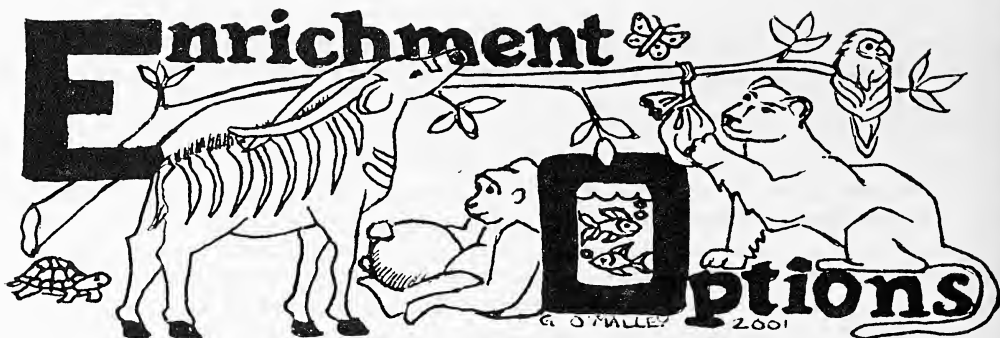
"Wolves could roam Oregon for the first time in many decades under a new strategy that carves a place for eight or more packs of the predators across the state," according to the *Oregonian*. The plan, which was drafted by a panel of Oregon ranchers, hunters, wildlife activists and others for the state Fish and Wildlife Commission, was to be presented at the commission September 9th. If accepted, it would "make Oregon the first Western state to independently accept an animal that has long inspired both admiration and hostility." Biologists think that wolves will migrate into eastern Oregon from established populations in Idaho. The strategy calls for at least four breeding pairs of wolves in both halves of the state, requires ranchers to get permits to kill wolves that have attacked livestock, and creates a compensation fund for losses to wolves. Source: *GREENlines Issue #2188 #9-9-04*

*Editor's Note: GREENlines Issues are a daily news digest from the Endangered Species Coalition about imperiled species and the people working to stop extinction. For more on what you can do visit - <http://www.stopextinction.org><*

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*EO Editors - Dawn Neptune, Utah's Hogle Zoo  
and Rachel Cantrell, Disney's Animal Kingdom*

## **Enriching Your Enrichment Program**

*By Pamela Jones, Rachel Cantrell, Monica Chaplin  
Animal Keepers, Disney's Animal Kingdom, Lake Buena Vista, FL*

Developing novel enrichment that meets the individual and natural history needs of the animal is a challenge often faced by animal keepers. Safe, yet interesting, enrichment items can be especially challenging for gorilla keepers to continually develop. Keepers at Disney's Animal Kingdom (DAK) have been able to create many exciting enrichment initiatives by following a specific framework for developing enrichment. We hope that the ideas presented here can provide new options for gorilla keepers.

In an effort to create a consistent animal training and enrichment program among all animal care teams at DAK, a park-wide process or framework was created (Sevenich MacPhee & Mellen, 1999). The framework is used by all animal care teams to develop, initiate and maintain area training and enrichment programs (<http://www.animalenrichment.org/>). The components of this framework are setting goals, planning, implementing, documenting, evaluating and re-adjusting. This framework is referred to as the S.P.I.D.E.R. (using the first letters of each of the framework components) model. The process is taught as part of an American Zoo and Aquarium Association (AZA) course, Managing Animal Enrichment and Training Programs.

### **Theming Issues**

Like many other zoological parks, DAK has specific requirements about what type of enrichment can be used in public viewing areas. This was one issue that had to be considered during the development of our enrichment initiative. Any enrichment used on exhibit must be naturalistic or "themed" to the area. The gorilla habitat at DAK is themed to look like an in situ research camp. Therefore, enrichment items with a camp theme are allowed. For example, camp dishes, gas cans and blankets can be given to the animals on exhibit. Boomer balls, fire hose and 55 gallon drums cannot be used on exhibit but can be used in holding areas. The development of a "theme" for a naturalistic exhibit has proven to be helpful in coming up with novel enrichment initiatives.

### **Bachelor vs. Family Management and Enrichment**

DAK houses 7.3 western lowland gorillas in two groups: a family group and an all-male group. The family group consists of Gino (male, age 23), Benga (female, age 33), Hope (female, age 19), Hasani (male, age 9), Jabari (male, age 6) and Makena (female, age 5). The bachelor group consists of Gus (male, age 22), Kejana (male, age 13), Zawadi (male, age 12) and Spike (male, age 10). As our enrichment program has evolved over time, keepers have discovered that the enrichment given to our



bachelor and family gorilla groups sometimes differs. This is a result of how the different groups use the devices and what behaviors we want to encourage or discourage.

Managing multi-male gorilla groups can sometimes be challenging. As young animals in the group start to mature, the social hierarchy of the group can be very dynamic. DAK primate keepers have utilized enrichment as a management tool for specific events, such as introducing animals and discouraging undesired behaviors (Jones, et.al., 2002). The gorilla groups have benefited from enrichment specifically designed to allow for displaying and displacing aggression as well as to increase foraging time.

## **Examples:**

### *Puzzle Feeders*

The Primate Team wanted to develop a goal-oriented device for the bachelor gorillas to utilize in their habitat. In the past, two of the bachelor gorillas had been seen using tools to obtain food. The team met and brainstormed enrichment ideas while taking the gorillas' natural and individual histories into consideration. The enrichment initiative developed at this meeting incorporated a series of puzzle feeders that could be themed to look like existing rock structures in the habitat. The main behavioral goal for the feeders was to present food in novel ways that would increase the gorillas foraging time. Foraging behaviors could be encouraged by installing more than one feeder so that they would have to check all of the feeders for food. This also prevents the animals from fighting over a single feeder.

A prototype was created to ensure the gorillas would use the puzzle feeder. It was installed in an area of the exhibit that was highly visible to guests. Keepers documented the gorillas' utilization of the feeder in daily reports. The gorillas quickly learned to modify branches into tools in order to get food from the feeders. Even the two gorillas who had never been seen using tools were also using branches to acquire to the food. The device was effective in keeping the gorillas engaged in this activity, leaving less time for aggressive interactions. One unexpected result of the feeder installation was the amount of time the gorillas spent interacting with it. We predicted that once the food was gone the gorillas would lose interest in the feeder. This was not the case. The gorillas came to the feeder throughout the day to see if more food was in it. Once this information was documented, the primate team received funding for six additional puzzle feeders since the first one was so popular with the gorillas.

Each device is hollow inside and has a mesh cover that can be secured and removed only by keepers. Food enrichment is placed inside the feeder. The gorillas must then figure out how to get the food out. Food can be placed close to the mesh top allowing the gorillas to use their fingers to get the food, or it can be placed far from the mesh requiring the gorillas to fashion a tool to get to the food. Food can be placed in up to four feeders on any given day in each group's habitat. Some modifications were made to the feeders mesh top to make it easier for the keepers to use more challenging for the gorillas to access the food. A lip below the lid was added to ensure the lid would not get stuck in the feeder. This also made it easier to secure the device. A variety of lids were developed to make it more challenging for the gorillas to get food out. One of the lids is metal and has small holes drilled in it. Unlike the mesh top, the gorillas cannot see what is in the feeder. Another lid has holes with tubes connected to it. Food is placed in the tubes in such a way that the gorillas cannot see it, and they must maneuver their tools in the tubes to get the food out.

Although the initial cost was high, the benefits have been enormous, and these feeders have proven to be well worth the cost. Giving the gorillas an opportunity to spend more time in non-aggressive activities has become a valuable management tool. In addition, the feeders are extremely durable and are gorilla-proof. They can be easily hosed and disinfected. They are made to look naturalistic and blend in with the exhibit. They have also encouraged the animals to stay in an area where they are highly visible to the guests because the gorillas use them repeatedly. The feeders are just one of many tools that we believe have contributed to the continued success of maintaining our bachelor group.

### *Mesh Boxes*

Mesh boxes provide our gorillas with many behavioral opportunities. The boxes are 12" x 12" x 12" (.3m x .3m x .3m) and made of 2" x 2" x 1/4" (~5 cm x 5cm x .64cm) woven stainless steel wire. They have a hasp and hinge on one side that allows the box to be opened and closed. The box can be secured shut using a shackle or clip. Items can be placed inside the box and the gorillas manipulate the item in order to remove it from the box via the mesh. Some favorite items used in the boxes are plastic 5-gallon bucket lids with soft food smeared on them, blankets with diet items inside, hay or wood wool with items inside and ice blocks. The gorillas will often spend more than 20 minutes manipulating the items in order to get them out of the box.

The mesh boxes provide the gorillas with the opportunity for object manipulation and the bachelor gorillas have been seen using sticks to maneuver items around in order to obtain food from the box. The dominant animal will often be occupied with the box for several minutes at a time, allowing the rest of the group optimal foraging opportunities. It is rare that one gorilla will monopolize the box, allowing multiple gorillas a chance to use it. They often return several times to manipulate a single box. The boxes are keeper friendly because they are easy to hang, clean and disinfect. They are also very sturdy and rust resistant.

### *Bungee*

Black, flexible latex tubing, or bungee tubing, has been a great addition to our enrichment program, offering an alternative to rope and fire hose. The tubing is made of 1/4-inch thick walls rubber latex and is similar to typical bungee cords in its spring-like movement. It is virtually indestructible and long lasting. It is easy to add to indoor enclosures because it can be woven into 2" x 2" (.5cm x .5cm) mesh and does not have to be knotted in order to be secured. It can be used in place of rope or fire hose to hang hammocks, platforms, benches, etc., or can be hung vertically from skylight mesh. The tubing is very easy to remove and reposition, and it is simple to clean and disinfect.

We purchased the tubing as an alternative to rope and fire hose. Initially, our primary goal was to hang objects from it, such as hammocks, in order to give the object more movement. We found that the gorillas enjoy the tubing in many other ways as well. We have cut portions of the tubing into 3-6 foot long sections (.9m to 1.8m) and stuffed food inside the two ends, thus encouraging the gorillas to manipulate the tubing to get the food out. Many of the gorillas, especially the females, enjoy carrying them around and will often drape several sections of the tubing around their bodies and creating nests from them. Our bachelor group likes to display with them, especially if several are hung vertically from the ceiling of one room. Often they will run through the room stretching one end of the tube and allowing it to slap against the walls.

The tubing can be purchased from McMaster-Carr and costs \$4.72 per foot. Although this is expensive when purchased in bulk, the tubing is extremely durable and lasts longer than hemp rope. It holds up well in moist climates and can be effectively disinfected, unlike rope. We believe the benefits far outweigh the cost of this product and have found that all of our other primates use them as well.

### *Rope Braiding*

Rope is a very common enrichment tool used by many gorilla keepers; it can be used alone for enrichment or to secure other enrichment items. The drawbacks of rope are that it can fray when repeatedly knotted and unknotted many times, the large knots required to hold a gorillas weight can be hard to untie, and rope is difficult to disinfect. By using simple weaving techniques, we are able to create secure loops in the rope that are safe and still allow for easy repositioning of ropes in the enclosure. See Appendix A for step-by-step instructions.

Rope braiding has been helpful in modifying the behavior of keepers. Animal keepers are more likely

to change enrichment items and cage furniture when braided rope is used because it allows one person to easily move enrichment items. A tire can be hung from the ceiling in the time it takes a keeper to climb a ladder and clip it onto an anchor point. No large, awkward knots need to be untied, and shackles and stainless steel rings can be permanently attached to allow for greater ease of movement.

DAK's hemp rope is purchased from Florida Rope and Twine at a price of \$3.16 per foot. If done properly, a braided rope will maintain its integrity for years. For this reason, we have found that rope braiding has helped keep down replacement costs.

### **Expanding Your Program Beyond Its Original Scope**

Traditional views of enrichment programs tend to favor unnatural, easy enrichment that is set up indoors and away from public view. Zoological parks have made great strides in providing more naturalistic habitats. Exhibits that immerse the guest in the habitat help inspire visitors and provide excellent opportunities for animals to exhibit natural behaviors. Naturalistic enrichment can enhance the exhibit further, and enrichment in habitats not only promotes species-specific behaviors but also assists in animal management. Strategic placement of non-naturalistic enrichment is another option. Although guests may not know exactly what activity is being performed, they will still see the animal interacting with its environment. The ability to provide creative enrichment, such as camp props and the rock puzzle feeders, has given us more opportunities to provide novel items for our gorilla groups. Following a set program has focused our enrichment brainstorming in order to get the best results for our efforts. It has also shown us how enrichment is a holistic approach with many aspects to be considered.

### **Rewards of Following an Enrichment Program**

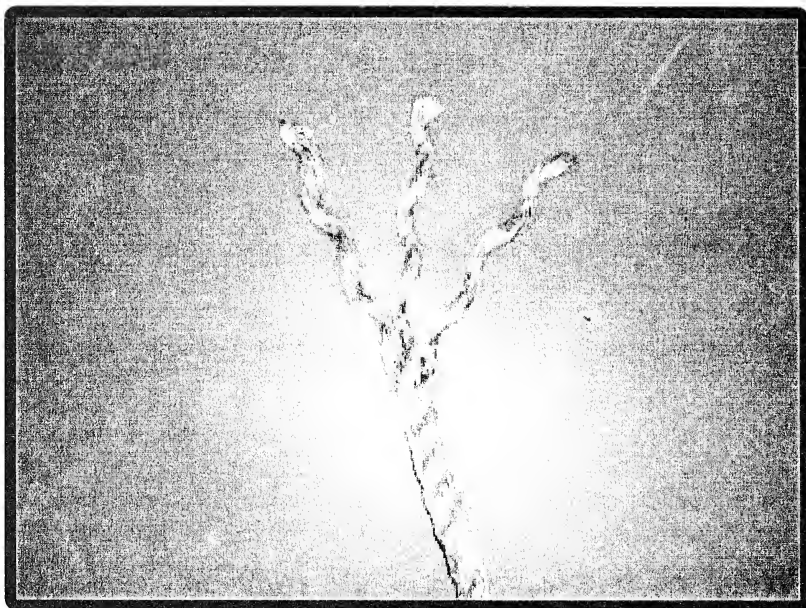
The benefits of following an enrichment program are enormous. At DAK, we have found that enrichment provides the gorillas with opportunities to perform species-specific behaviors. The SPIDER model has been integral in allowing keepers to develop new and exciting enrichment initiatives for the animals. The key is in maintaining the cycle, including evaluation and readjustment. With these components of the model, enrichment initiatives are constantly monitored to ensure we are meeting our goals.

The easier enrichment is to install, disinfect and change, the more likely keepers will implement it. At DAK, making keeper-friendly enrichment is a consideration in the development process. Being able to single-handedly change enrichment items quickly and disinfect items easily can be extremely beneficial to keepers with busy schedules. We hope that these examples may be of help to further the development of your enrichment program.

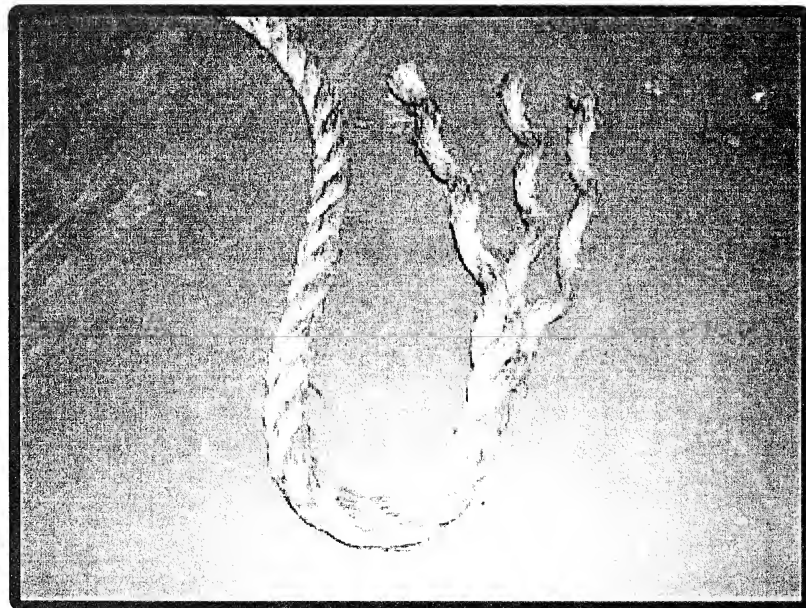
### **References:**

- Sevenich Macphee, M. & Mellen, J. (1999). Framework for successful training and enrichment. Paper presented at the Pan African Association of Zoos, Aquariums, Botanical Gardens, Cape Town, South Africa
- Jones, P., Pazzaglia, D., Richards, B. (April 2002). Using Enrichment as a Management Tool  
Animal Keepers' Forum 29 (4): 166-169

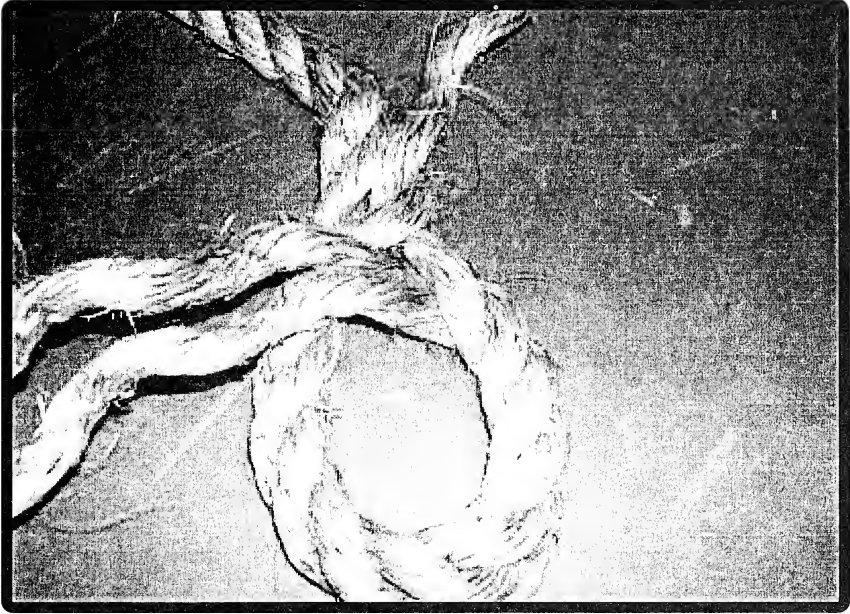
*Photos by P. J. Jones*



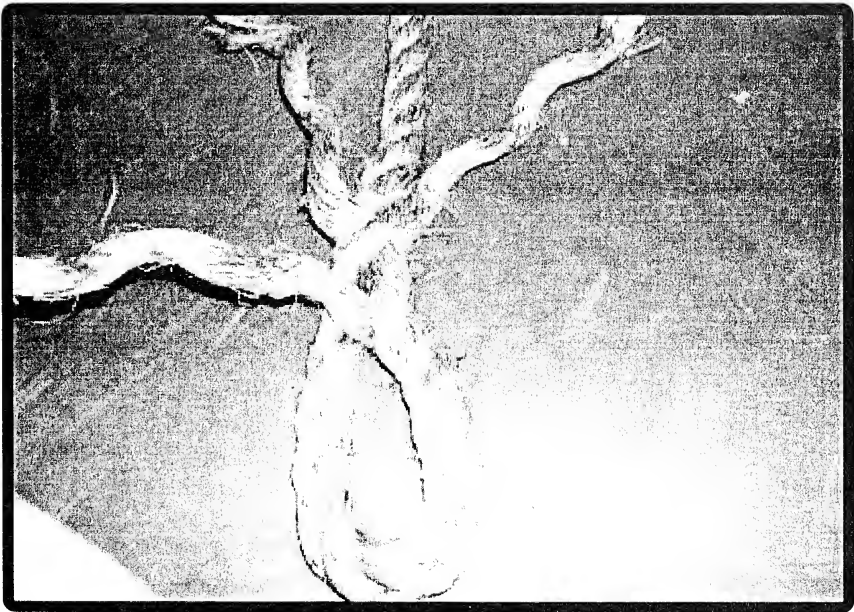
The rope can only be braided in this direction, with the ends in your right hand.



Separate the three strands. It may help to use masking tape on the ends to keep them from coming apart. The strands must be woven in a specific order to start, with #1 on the far right, #2 in the middle, and #3 on the left. They must stay in this order at the beginning, and you can number the ends to help you remember which end is which. Consider what size loop you will want keeping in mind the animals that will be using it. You want to avoid a loop that they could get their hands trapped in. Usually the smallest loop possible is best.



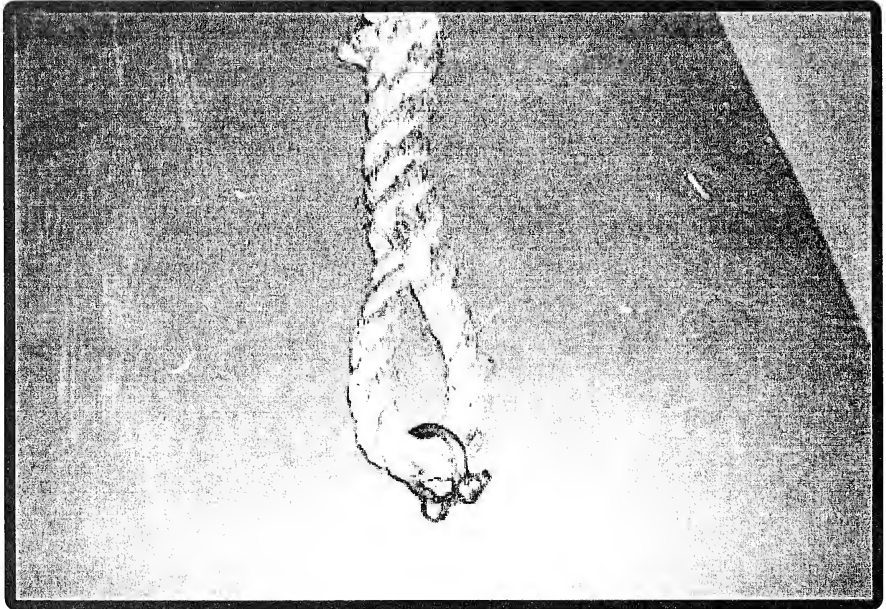
Start by taking strand #1 and weave it underneath one strand, pulling it through tightly and down toward the rope.



Now weave strand #2 over #1 (to the left) and underneath the very next loop in the rope. Pull it through tightly, like the first one. It helps to continually twist the rope in the direction you want to go.



You should now have all three strands pulled through evenly, and all going in a different direction. Pull on them to tighten everything up, and continue the braiding process.



You won't have to be concerned with which # strand you start with anymore, you only have to follow the pattern. Most loops should have at least three braids (in other words, each strand is woven through 3 times) for maximum strength.

*(Ideas appearing in this column have not necessarily been tested by the editors for safety considerations. Always think ahead and use good judgement when trying new ideas. You are invited to submit materials for the Enrichment Options Column. This might include recipes, toys, puzzle feeders, olfactory enrichment ideas, etc. Drawings and photos of enrichment are encouraged. Send to: AKF/Enrichment, 3601 S.W. 29th St., Suite 133, Topeka, KS 66614-2054. Eds.)*



# Chapter News Notes

## Point Defiance AAZK Chapter

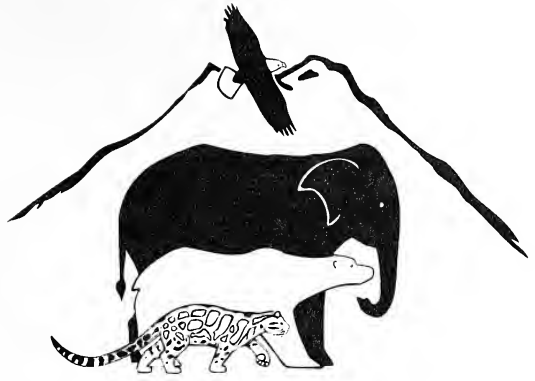
Newly elected officers are:

President.....Stephanie Prine

Vice-President.....Cindy Roberts

Secretary.....Lisa Triggs

Treasurer...Shannon Smith



## POINT DEFIANCE **AAZK** CHAPTER

As usual, the Point Defiance AAZK Chapter has been busy! We just wrapped up our second Bowling for Rhinos event where we were able to bring in over \$10,000!

We continue to be pleasantly surprised by the success of The Clouded Leopard Project that has raised close to \$20,000 for conservation and research since 2000. I encourage those not familiar with the project to visit the newly revamped website at [www.cloudedleopard.org](http://www.cloudedleopard.org)

We've also been busy with other fundraisers including our annual garage sale, participation with the Green Fund Network, our Zoolights photo booth, and our newest endeavor; partnership in a haunted house. We've also adopted a new Chapter logo. We hope all the other chapters are having a great year as well!

Our logo was designed by Jessie Sutherland and was adopted in June of 2004. We chose the species on the design from our own collection and tried to include an animal from every department of the zoo that all would feel represented.

*---Stephanie Prine, President*

## CHAPTER LOGOS

Does your Chapter have a new logo? Please keep us up-to-date if you change your Chapter logo. Also, new Chapters are encouraged to send in a copy of their logo as soon as they adopt one. Logos may also be sent as graphic file attachments (tiff or jpeg) to the email address listed below.

We will be producing another Chapter Logo Registry in 2005, so make certain the logo in our file is your most current one. When sending in logos, please include name of the artist/designer, date logo was adopted, and what, if any, significance is in the design - animals represented, etc.

**What's your AAZK Chapter been up to? Send your Chapter News to the Editor at:  
[akfeditor@zk.kscoxml.com](mailto:akfeditor@zk.kscoxml.com)**

**Audubon Nature Institute New Orleans Chapter**

This year we adopted a new logo representing animals from all of Audubon Nature Institute's facilities. The fleur de leis background reflects the French heritage of Louisiana. It was designed by Ty Fayard and Laurie Corkern and adopted in February 2004.

Our 2004 Officers are:

President.....Michelle Muniz

Vice President.....Amy Davis

Treasurer.....Kathy LeBlanc

Secretary/Liaison.....Ty Fayard

Hopefully everyone enjoyed themselves at the 2004 conference in Dallas. We look forward to seeing all of you in New Orleans for the 2005 Conference. Our theme is "Bring Out Your Wild Side, New Orleans Style." Look for conference details in future issues of *Animal Keepers' Forum*.

--Ty Fayard, Sec'y/Liaison



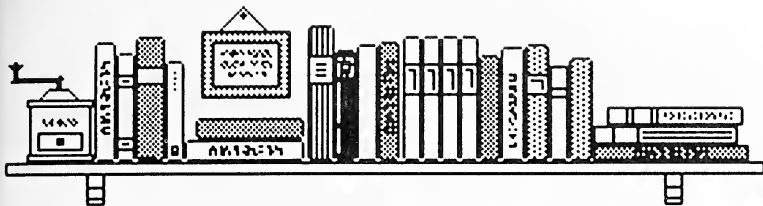
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**Have You Purchased Your Enrichment or Biological Information CD Yet?**

Following the recent release of the Third Edition of the AAZK Enrichment Notebook (CD), review copies were sent to several people so they could give the CD a try and see what they thought. Peter Dickinson, editor of *ZooNews Digest* out of the United Kingdom, had the following to say about this new resource - "I have spent an enjoyable past two days exploring this CD. Over the past few years I have extensively read enrichment papers and books both in paper and web format and this one takes the biscuit. It is the best I have come across so far. Certainly a very worthwhile addition to every zoo library. If you have no enrichment literature then this should be your first purchase. If you have a big enrichment library then this needs to be your next purchase! Buy it!"

We are pleased that Peter found this CD so worthwhile and for allowing us to share his comments with you. Order forms for the Enrichment Notebook CD, as well as the Fourth Edition of the Biological Values Information on Selected Mammals CD, are available at the AAZK website ([www.aazk.org](http://www.aazk.org)) and order forms appear in this issue of *AKF*. Both CDs may also be ordered by phone from Administrative Office using a MasterCard or Visa. Cost for each is \$25.00 for AAZK members and \$40.0 for nonmembers. Prices include domestic and Canadian shipping. To order by phone call 1-800-242-4519 (US) or 1-800-468-1966.





# Book Reviews

## **Where the Grizzly Walks -The Future of the Great Bear**

By Bill Schneider

The Globe Pequot Press

P.O. Box 480, Guilford, CT 06437

Copyright 2004, ISBN 0-7627-2602

302 pp. Hardback \$19.95

*Review by Wendy Gardner*

*Giant Panda Keeper II*

*Zoo Atlanta, Atlanta, GA*

Anyone interested in grizzly bears and their plight should read this book. It deals with all of the sensitive issues surrounding these magnificent bears and all the people involved in their management and hopefully their preservation. It is unique in that the author talks to people on both sides of the fence from environmentalists, wildlife managers, researchers, ranchers, farmers to - inevitably - the politicians. He spent time with many people from all of these groups and brings forth all of their ideas and concerns about the future of the grizzly and its habitat in an informative, mind-opening way. He discusses how the grizzly is still an animal that is misunderstood by many people and how the media uses this to sell stories even if it is at the bears' expense. The media will jump on a story about a bear attack whether it is a person or livestock and repeat it for days, but they rarely, if ever, talk about how many bears leave people and livestock alone. This can make it very difficult to change peoples' perception of bears and therefore harder to get people to accept them and fight to save them and their habitat.

Schneider also talks about the history of the grizzly, including the habitat they once occupied, to their present day habitat, which is only about 2% of its original size. With more people moving in, logging, mining and gas exploration, the little space the bears have left is being cut up and separated. Some people fear this could lead to "islandization" and possible extinction of some groups of grizzlies.

Schneider has spent many years in the field and tells the story of his encounters with grizzlies. This makes the book even better, since he has experienced the wilderness where the great bear lives and makes you want to do all you can to protect the bears and their last remaining habitat. He asked the people he interviewed for the book direct questions that are outlined at the end of the chapters, the question that I felt was the best is, "Why Do We Need Grizzly Bears?" There were several different answers, but my favorite was by Brian Peck of the Sierra Club Grizzly Bear Ecosystem Project, "I'm not sure that's the right question because it carries with it the assumption that the only reason we need something is because it's good for human beings".

This book gives really good information to people looking to learn more about grizzly bear conservation and management and ways in which they can help. It introduces you to the people who are in charge of bear management as well as the numerous people who have, and are, dedicated to saving the grizzly bears and the last places these bears have to roam free.

## **Zoo and Wild Animal Medicine**

By Murray E. Fowler, DVM and R. Eric Miller, DVM

Saunders-Elsevier Science, 11830 Westline Industrial Dr., St. Louis, MO 63146

ISBN 0-7216-9499-3 Copyright 2003

Hardcover 782 pgs. \$134.00

*Review by W.K. Baker, Curator*

*Little Rock Zoo, Little Rock, AR*

When I first received this book I was excited as always to see a new Murray Fowler product and this was no exception. This is the fifth edition of this work and it came as no surprise that it was an improvement on the earlier editions. What did surprise me was the quality of the contributing authors, truly some of the finest veterinarians in the field of zoology and wildlife management, people like Barbiers, Citino, Drew, Fowler, Gage, Miller, and Wolfe to name a few.

The book is broken down into six parts focusing respectively on Fish, Amphibian Groups, Avian Groups, Mammal Groups, and finally Diseases Common to Multiple Taxa. Within each part there is a series of papers individually authored on a specific relevant topic. When counted the book is composed of a total of 80 individual papers, thus the 782 page length of this work.

The taxonomic nature of this work made it easy for me to quickly reference information on virtually any topic of interest. While it covers the spectrum of animals, the avian and mammal sections were particularly heavy with authors and information. The paper on Felidae by Ray Wack, DVM well represented values and biostatistics. Also, the section on diseases was especially useful and a nice alternative to reaching for my Merck. The papers on Toxoplasmosis by Barbara Wolfe, DVM and Tuberculosis by Ramiro Isaza, DVM were extremely well-written.

Overall it was easy to read, and the authors were concise and to the point. I would highly recommend this reference to anyone in the field of wildlife management, zoological husbandry, or veterinary medicine. If I had any complaint about this work it would be the quality of the book paper, which is much too thin for heavy usage in a reference work.

### **The Exotic Amphibians and Reptiles of Florida**

By Walter E. Meshaka, Jr., Brian P. Butterfield, and J. Brian Hauge

Krieger Publishing Company, P.O. Box 9542, Melbourne, FL 32902-9542

Copyright 2004, ISBN# 1-57524-042-4

Hardcover, 166 pp. \$34.50

*Review by Jeremy Konwiser, Animal Keeper  
The Living Desert, Palm Desert, CA*

Exotic and alien species present a major threat to our native flora and fauna. These introduced species compete with indigenous species for resources, often becoming more successful than the plants or animals they have displaced. Some of these species are introduced intentionally, such as the cane toad, or accidentally, such as escaped pets or stowaways.

The Exotic Amphibians and Reptiles of Florida is a descriptive account of the 40 documented species established in Florida. Natural history information is provided for each species, including history of introduction, geographic distribution by county, habitat and habits, reproduction, diet, and predators. A color photo accompanies each description, and some accounts have charts listing diet items or nest parameters.

Following the species accounts (32 lizard, 4 frog/toad, 2 snake, 1 turtle, 1 crocodilian) is a list of 19 species of uncertain status. These species have been observed in Florida, but do not meet the authors' criteria for an established species, such as successfully reproducing or being in existence for at least one-generation time. An afterword by Walter E. Meshaka, Jr., examines the human role in colonization of non-indigenous species in Florida, looking at how these introduced species become successful in establishing populations and the mechanisms through which they are introduced and dispersed.

A glossary, table of contents with higher taxonomic units in alphabetical order (Appendix A), a cross-reference of scientific and common names (Appendix B) and references round out the book.

I found The Exotic Amphibians and Reptiles of Florida to be an interesting book, a useful resource for herpetologists working with the listed species. Educators working in Florida zoos and natural history museums should have a copy handy to illustrate the impact of introduced and exotic species in their home state.

*Institutions wishing to advertise employment opportunities are asked to send pertinent data by the 10th of each month to: Opportunity Knocks/AKF, 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054. Please include closing date for positions available, and when setting these dates keep in mind that because of bulk-mail, most readers do not receive their AKF until the middle of the month or later. There is no charge for this service and fax or e-mail listings of positions which become available close to deadline are accepted. Our Fax is (785) 273-1980; e-mail: akfeditor@zk.kscoxmail.com< Listing must be sent as MS Word attachment. To post a position on the AAZK website, have listing to email address above by the 25th of the month for posting on the first day of the following month. We are no longer located at the Topeka Zoo, so please note new address to avoid delays in processing.*

**Zoo Keeper** – Claws ‘N’ Paws Wild Animal Park, Lake Ariel, PA

Send resumé to: Vince Hall, Claws ‘N’ Paws Wild Animal Park, Box 1932 Ledgesdale Road, Lake Ariel, PA 18436 or email to [vincehall@echoes.net](mailto:vincehall@echoes.net)< Looking for a full-time keeper who is self-motivated to help care for a collection of over 120 species of mammals, birds and reptiles. We offer competitive salary, paid insurance, sick days and vacation. **Responsibilities:** include all phases of animal care, and also scheduled live animal presentations to our visitors. **Requirements:** applicant should have had paid experience in a zoo setting and have a degree in an animal-related field. Person selected should be able to work with a minimum of supervision and be able and willing to attend to any minor maintenance required.

**Wildlife Educator** - Animal Edutainment Inc, Aubrey, TX

Direct inquiries and resúmes to: Animal Edutainment Inc., Attn: Dave Kleven, 7151 Cedar Lake Rd. Aubrey, TX 76227; (940) 365-9741; Fax (940) 440-3564 [critterman@animaled.com](mailto:critterman@animaled.com)< For more information about our organization, check-out [www.critterman.com](http://www.critterman.com). Position for Animal Edutainment, Inc.'s Animal Ambassador outreach program serving the Dallas/Fort Worth and surrounding areas. Located 14 miles from Denton, TX - home of two universities. **Position available until filled. Responsibilities** include: daily care and maintenance of animal compound; handling of a diverse group of animals; and public speaking/program presentation. **Requirements:** Must have a professional appearance and outstanding “people skills”. Non-smoker, no facial piercing or tattoos that cannot be covered by clothing. Must have a lively personality and charismatic presence. Ability to work both independently, and as a team player. Must have a valid driver’s license, clean driving record, be able to lift 50lbs., and have a sense of humor. Must demonstrate the ability to listen and follow directions. Prefer animal-related education/degrees or related work experience with animals or public presentations. Starting \$9.00 to \$10.00 per hr., plus medical stipend.

**Zoo Director** - Frank Buck Zoo, Gainesville, TX

Obtain position description and submit application at the City of Gainesville Human Resources Department, 200 S. Rusk, Gainesville, TX 76240; web address [www.gainesville.tx.us](http://www.gainesville.tx.us)< Located in the small town of Gainesville, TX, the Frank Buck Zoo is seeking a team-oriented individual to serve as zoo director. **Responsibilities:** supervise zoo staff and participate in the day-to-day care and maintenance of our 120+ animals and the facilities. **Requirements:** likely candidates should possess a strong business background (retail business experience helpful), ability to administer a budget, excellent record-keeping and organizational skills, proven grant-writing skills, working knowledge of a zoo and current industry trends, strong marketing and creative skills, ability to manage change and work flexible hours, possess strong people and networking skills, and be a team player. Knowledge of the ISIS data entry is preferred, but not required. Requires a Bachelors degree in Business Management or a related field; addition experience or education in Zoology/Biology/Wildlife Management or a related field preferred. The salary range is from \$26,547.00 to \$45,526.00 annually and includes a benefits package. EOE.

**Aviculture Internship** - International Crane Foundation, Baraboo, WI

Applicants should submit a cover letter, resumé, and three (3) letters of recommendation to Kelly Maguire-Aviculture Internships, International Crane Foundation, P.O. Box 447, Baraboo, WI 53913. Final candidates will be notified for a phone or in-person interview. Stipend is \$375/month plus housing provided on site. ICF is a non-profit conservation organization that works worldwide to save the fifteen species of cranes and their habitat by providing experience, knowledge and inspiration to people. Aviculture interns receive hands-on training in the care and management of endangered cranes. †Interns will be exposed to general crane husbandry, handling techniques, health care, incubation, artificial insemination, behavior, and breeding management. **Responsibilities:** vary by season and include daily cleaning, food provisions and other care of adult cranes and chicks comprise half of the job. Other tasks include annual facilities maintenance, pen repair, video monitoring, chick rearing and assisting full-time staff with projects. **Requirements:** Two years of college or other practical experience with knowledge of and interest in bird conservation. Persons with 4-year college degrees are preferred. Must be able to carry a 50-pound feed bag and do hard work outdoors, in all weather conditions.

*The following two (2) positions are available at the Kentucky Reptile Zoo, Slade, KY. To apply for either position, send a cover letter, resumé, transcript, and at least 2 (preferably 3) references to: Kristen Wiley, Internship Coordinator, Kentucky Reptile Zoo, 200 L&E Railroad, Slade, KY 40376; or email to: kyreptil@pop.mis.net<*

#### **Outreach Program Director** - Kentucky Reptile Zoo, Slade, KY

This is a full time position. **Responsibilities:** will include traveling to and giving reptile outreach programs to locations within 100 miles; scheduling and advertising the programs; and husbandry of the education animals. **Requirements:** include a Bachelor's degree in related field, at least one (1) year's experience in an educational setting, and a willingness to handle snakes and other reptiles. Patience and good verbal communication skills are a must. Programs are given to schools, camps, parks and other community organizations in the area, as well as to field trips at the zoo's facility. The educator may use the zoo's vehicles to travel to programs; a valid driver's license and a good driving record are required. Kentucky Reptile Zoo's programs stress conservation and strive to include snakes and other misunderstood reptiles as part of our important natural heritage. The successful applicant will be passionate about conservation and natural history education. Pay will be based on program fees; 60% of each fee will go to the educator. This position is **open until filled**; please apply immediately if interested.

#### **Internship** - Kentucky Reptile Zoo, Slade, KY

Students majoring in the biological or natural sciences are preferred. Interns are required to be either college students or recent graduates. Former interns have arranged for academic credit with their institutions. Benefits include experience with one of the most extensive and diverse collection of snakes in the United States, housing, and \$55/week to cover expenses. Interns have been successful in finding zoo keeper positions; over 95% hire rate! **Responsibilities:** The intern will assist in the captive maintenance of the zoo's reptile collection, collect admissions to the exhibit, give interpretive talks and interact with the public, assist with educational outreach programs, and perform other duties as assigned. In addition, the intern will be responsible for the completion of at least one research project related to the field of herpetology. The intern will **not** be involved in the handling of any venomous species. **Requirements:** Desirable qualifications include a willingness to handle snakes and other reptiles on a daily basis, ability to communicate effectively with people, writing skills, orientation to details, and self-motivation. The intern will be required to work Saturday and Sunday, with days off during the week. Students majoring in the biological or natural sciences are preferred. Interns are required to be either college students or recent graduates. Former interns have arranged for academic credit with their institutions. Benefits include experience with one of the most extensive and diverse collection of snakes in the United States, housing, and \$55/week to cover expenses. Interns have been successful in finding zoo keeper positions; over 95% hire rate! Personal transportation is recommended. A valid driver's license is required. Starting dates are flexible, but a minimum of three (3) months covering fall (September-November) is required.

#### **Volunteer and Intern Positions** - Wildlife Care Association, Sacramento, CA.

To apply, please contact WCA by any of the following methods: Phone: 916-965-WILD; E-mail: wcavolunteers@hotmail.com< Online: <http://www.wildlifecareassociation.net/>> Please include your name, phone number, e-mail, what you how interested in helping, and any questions you may have. We will answer your questions and send you an application. Wildlife Care Association (WCA) is a non-profit, independent, volunteer-based association located in Sacramento that is permitted to care for wildlife. Concerned citizens and other agencies bring in over 6,000 sick, orphaned, and injured animals each year. With the help of volunteers, staff, and local vets, WCA provides medical services to these animals. Once the animals have recovered from their injuries or illness, or have grown and learned to hunt and fend for themselves, they are released into the wild, giving them a second chance at life. **Opportunities/Responsibilities** -Year-round, we have opportunities for phone volunteers (who provide valuable information to the public) and home rehabbers (require license). During baby-bird season (early April through late August), we have additional positions for everything from facility volunteers (who feed birds, do meds, make food, and clean) and interns (who will also learn about triage, while receiving school credit) to front desk people (who greet the public) and from transporters (who use their vehicle to get animals to us) to people who do data entry. Many other opportunities exist, so feel free to contact us if you are interested! Additionally, even if you miss the baby-bird season this year, please contact us and we will make sure you have the opportunity to be involved next year! **Requirements:** Vary with opportunity, but usually include an age requirement and a minimum time commitment.

#### **Aviculture Interns** - Hawaiian Endangered Bird Conservation Program

Program is at the Keauhou Bird Conservation Center (KBCC) on the Big Island of Hawaii and the Maui Bird Conservation Center (MBCC) in the island of Maui. For more information on internships at KBCC,

please send a resumé, cover letter, and the names and contact information of three (3) references to: Tracey Goltz, P.O. Box 39, Volcano, HI 96785 or fax (808) 985-7034. For more information on internships at MBCC, please send this same information to: Mary Schwartz, 2375 Olinda Road, Makawao, HI 96768 or fax to (808) 572-3574. PLEASE, no phone calls or emails. **Responsibilities:** daily tasks include husbandry duties such as diet preparation, aviary and facility maintenance, behavioral observations of breeding birds, grounds keeping and predator control. **Requirements:** applicant must be able to live with several roommates in a remote area and should show enthusiasm for work with captive endangered Hawaiian birds. Applicant must have a valid driver's license and health insurance. Internships last for a 3-6 month period and interns receive \$20/day stipend plus housing.

### **Big Cat Internships** - Tiger Creek Wildlife Refuge (TCWR), Tyler, TX

As seen on Animal Planet in "Growing Up Tiger", TCWR is a division of Tiger Missing Link Foundation. **Commencement date:** On-going duration: three (3) months on a month-by-month basis. Summer (May-Aug) Internship Applications due March 1st. For contact information, application packet, additional information, and to see what past interns have to say about Tiger Creek: visit [www.tigercreek.org](http://www.tigercreek.org). Are you interested in learning more about big cats or establishing a career path working in conservation as a zookeeper, a wildlife manager or a veterinarian? You can earn your STRIPES at Tiger Creek and obtain college credit through your college or university at the same time. Right now there are up to three (3) positions available consisting of a six (6)-day work week with a strong commitment for three (3) months. At Tiger Creek you are more than a worker, you are considered a friend and we strive to build long-term working relationships as we know you are the future animal caretakers! Based upon your performance after your training, you may be eligible for any permanent animal care positions that become available. **Requirements:** At least 20 years old and a junior in college. You should be capable of paying attention to details and following safety rules; you must have your own transportation to and from Tyler, TX; and you also provide your own food while here. We provide room; uniforms; materials and curriculum; and indoctrination and safety training. The Intern House has central heat and air, a full kitchen, a shared telephone line for incoming calls, Internet access for email and surfing, a TV with VCR/DVD, even satellite so that you and the other interns can enjoy Animal Planet during your off hours! The intern house is fully furnished and dormitory-style with rooms being shared by two people. All of this and a few rescued dogs or puppies in the backyard...because we want your stay to be as comfortable as possible while here at Tiger Creek. The Tyler/East Texas area has a lot to offer, there is horseback riding available at no cost to our interns, lakes within beautiful parks, movie theaters, numerous local night clubs and plenty of restaurants and much more.

**Environmental Interpretation and Wildlife Care Internship** - Trailside Museums and Wildlife Center, Bear Mountain State Park, Bear Mountain, NY 10911-0427. Contact: Jennifer Verstraete at (845) 786-2701 ext. 278 or 265; email - [elayne.keith-feller@oprhp.state.ny.us](mailto:elayne.keith-feller@oprhp.state.ny.us) Start Dates: Summer internship mid-May through mid-August; Fall internship late-August/early September through early November. Internship is unpaid, but provides knowledge and experience; written evaluation gladly given. Possible course credit if intern can arrange it. Interns will work at least three (3) days a week, including one weekend day. No housing available. We reimburse full payment for required pre-exposure rabies series. **Qualifications:** Enthusiasm, comfortable handling animals, motivated to learn. Must be 18 or older; preference given to college student looking for experience in the care of wildlife and in environmental interpretation. **Responsibilities:** 1) Provide care for permanently injured or orphaned park wildlife (mammals, birds, fish, amphibians and reptiles) in zoo setting. Under the supervision of a Senior Zookeeper will prepare food and diets, maintain enclosures and exhibits, and provide enrichment; 2) Interact with the public answering questions, interpreting exhibits, possibly developing and offering short interpretive talks.

### **Big Cat Internship** - Wildlife on Easy Street, Tampa, FL

For more information contact Scott Lope at 813-323-5991 or email at [catfoto1@aol.com](mailto:catfoto1@aol.com) Two (2) positions available for six-month internship at TAOS accredited non-profit big cat sanctuary. [www.wildlifeoneasystreet.com](http://www.wildlifeoneasystreet.com) **Responsibilities** (include but are not limited to): daily husbandry, exhibit cleaning, diet preparation, feeding, operant conditioning and behavioral enrichment for the following species: lions, tigers, leopards, cougars, lynxes, servals, caracals, bobcats, lemurs and other exotic animals. We provide invaluable hands-on experience, on-site housing and utilities, safety training and educational materials. Advanced training and long-term employment opportunities exist for the right candidates. **Requirements:** applicants must be willing to work six days a week, some holidays and follow strict safety guidelines. Hard work ethic and love of animals more important than degree.

**Internships** - The Florida Aquarium, Tampa, FL

Internships are available in Animal Health, Animal Programs and Husbandry departments. Internships available year-round for varying lengths of time and can be tailored to the individual student's needs. Internships are unpaid but provide valuable hands-on experience. Interested persons should send resumé to: Human Resources, 701 Channelside Dr., Tampa, FL 33602. For more information visit our website at [www.flaquarium.org](http://www.flaquarium.org)< **Responsibilities:** food preparation, feeding, cleaning enclosures, assist with medical procedures, animal observations, daily record keeping, enrichment activities, assist with training sessions and shows.

**Zoo Design Internship** - ZooLex, Vienna, Austria

In 2002 the ZooLex Zoo Design Organization started to offer internships. Carlyn Worstell was our first intern. She finished her internship with the ZooLex Zoo Design Organization in September 2003 and is now working with the Wildlife Conservation Society at Bronx Zoo. We offer internships in Vienna, Austria. Interns who stay for a few weeks only, mainly work on the ZooLex Gallery. Interns who stay longer also complete a research project. You will find more information on ZooLex internships here: <http://www.zoolex.org/intern.html>< ZooLex Zoo Design Organization is a non-profit organization registered in Austria. ZooLex runs a professional zoo design website and distributes a newsletter. More information and contact: <http://www.zoolex.org/home.html>

**SOS Rhino Seeks Volunteers**

SOS Rhino is looking for volunteers interested in helping us in our efforts to save the Sumatran rhinoceros. Our Borneo Team is studying the demographics of the remaining animals in Tabin Wildlife Reserve to determine when patrol units, habitat protection, or translocation may play a role in the rhinos' survival. Please visit SOS Rhino's web site for detailed information: <http://www.sosrhino.org/programs/volunteer.php> Or contact Cindy Salopek, Projects Associate/SOS Rhino via e-mail at: [cindy@sosrhino.org](mailto:cindy@sosrhino.org)<

**Volunteer Positions** - Orangutan Health Project in Sumatra, Indonesia

A research project, now in its 5th year, aims to discover more about the special behaviors and ecological conditions necessary for the maintenance of health in wild orangutans. MVDr. Ivona Foitova leads a truly international team of scientists in an attempt to improve the environment of captive orangutans, and the chances of work on the ground also helps to guard the forest against the devastating impacts of logging on the natural habitat of one of the last great apes. **Responsibilities:** volunteers will be part of the team helping in every way - from simple data entry and getting supplies for our base, to locating, counting or following wild orangutans in the forest of North Sumatra. This may not always be enjoyable, but it will certainly be memorable. For more information on the project and our volunteer program, log on to: <http://www.orangutan-health.org> or email us at: [orangutanhealth@indo.net.id](mailto:orangutanhealth@indo.net.id)

More Zoo vacancies can be seen by visiting:

American Zoo and Aquarium Association - Job Listings

<http://www.aza.org/JobListings/>

American Association of Zoo Keepers - Opportunity Knocks

[http://www.aazk.org/aazknew/animalKeepersForum/opportunity\\_knocks.asp](http://www.aazk.org/aazknew/animalKeepersForum/opportunity_knocks.asp)

European Association of Zoos and Aquaria - Vacancies

<http://www.eaza.net>

Berufsverband der Zootierpfleger e.V

<http://www.zootierpflege.de>

# AAZK Membership Application

check here if renewal [ ]

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State/Province \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_

Country \_\_\_\_\_ Email \_\_\_\_\_

## U.S. Members

**\$40.00 Professional**

*Full-time Keepers*

**\$70.00 Professional**

*Renew for 2 years & Save!  
Full-time Keepers Only*

**\$35.00 Affiliate**

*Other staff & volunteers*

**\$35.00 Associate**

*Those not connected with  
an animal facility*

**\$65.00 or up - Individuals  
Contributing/U.S.**

**\$125.00 or up**

**Institutional/U.S.**

*Organizations/Institutions  
(requires Board approval)*

**International Members**

**\$55.00 International**

*All members outside U.S. &  
Canada regardless of category*

## Canadian Members

**\$40.00 Professional**

*Full-time Keepers*

**\$70.00 Professional**

*Renew for 2 years & Save!  
Full-time Keepers Only*

**\$40.00 Affiliate**

*Other staff & volunteers*

**\$40.00 Associate**

*Those not connected with  
an animal facility*

**\$65.00 or up - Individuals  
Contributing/Canada**

**\$125.00 or up**

**Institutional/Canada**

*Organizations/Institutions  
(requires Board approval)*

**Library Only**

**\$40.00 Library**

*Available only to public  
& university libraries*

Zoo Affiliation (if any) \_\_\_\_\_

Zoo Address \_\_\_\_\_

Title \_\_\_\_\_

Work Area \_\_\_\_\_

My check is enclosed (AAZK, Inc.)

Please charge my credit card

MASTERCARD      VISA      Card # \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Name on card \_\_\_\_\_ Expiration date \_\_\_\_\_

Signature \_\_\_\_\_

Mail this application to: AAZK Administrative Offices, 3601 S.W. 29th, Suite 133 Topeka, KS 66614-2054. Make checks/money orders payable to AAZK, Inc. Must be in U. S. FUNDS ONLY. Membership includes a subscription to *Animal Keepers' Forum*. The membership card is good for free admission to many zoos and aquariums in the U.S. and Canada.



**AMERICAN  
ASSOCIATION  
of ZOO KEEPERS**

3601 S. W. 29th St.  
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Animal Keepers' Forum  
30th Anniversary  
1974 - 2004



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# ANIMAL KEEPERS' FORUM



***30th Anniversary Year***  
**1974 - 2004**

**The Journal of the American  
Association of Zoo Keepers, Inc.**

**NOVEMBER 2004**

**Managing Editor:** Susan D. Chan • **Associate Editors** • Kayla Grams, Grand Junction, CO & Mark de Denus, Reid Park Zoo • **Enrichment Options Coordinators:** Dawn Neptune, Utah's Hogle Zoo & Rachel Cantrell, Disney's Animal Kingdom • **Legislative/Conservation Outlook Column Coordinator:** Georgann B. Johnston, Sacramento, CA. • **ABC's Column Coordinator:** Diana Guerrero, Big Bear Lake, CA • **Reactions Column Coordinator:** William K. Baker, Jr., Little Rock Zoo

Animal Keepers' Forum is published monthly by the American Association of Zoo Keepers, Inc., 3601 S.W. 29th Street, Suite 133, Topeka, KS 6661-2054. Ten dollars of each membership fee goes toward the annual publication costs of Animal Keepers' Forum. Postage paid at Topeka, KS.

**AAZK Executive Director:** Ed Hansen, AAZK, Inc., Topeka KS  
also serves as AAZK Liaison to the American Zoo & Aquarium Association (AZA)

### BOARD OF DIRECTORS

|  |                                 |
|--|---------------------------------|
| Denise Wagner, The Phoenix Zoo, Phoenix, AZ 85008                              | <i>President</i>                |
| Kevin Shelton, The Florida Aquarium, Tampa, FL 33602                           | <i>Vice President</i>           |
| Jacque Blessington, Kansas City Zoological Gardens, Kansas City, MO 64132-4200 |                                 |
| Bruce Elkins, Indianapolis Zoo, Indianapolis, IN 46222-0309                    |                                 |
| Shane Good, Cleveland Metroparks Zoo, Cleveland, OH 44109                      |                                 |
| Kevin Shelton, The Florida Aquarium, Tampa, FL 33602                           | <i>Immediate Past President</i> |

### COMMITTEES

#### Nominations & Elections

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Chair - Janet McCoy, The Oregon Zoo

#### Professional Development

Chair - Shane Good, Cleveland Metroparks

### MEMBERSHIP SERVICES

#### ADT, EDT and ATD Forms

AAZK Administrative Offices/Topeka

#### Enrichment Committee

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Disney's Animal Kingdom

#### AAZK Website

Liaison to Webmaster - Denise Wagner

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Co-Chairs- Angela Binney, Disney's Animal Kingdom & Kim Kezer, Zoo New England

#### International Outreach

Jeannette Beranger, SVF Foundation, Newport, RI

#### AAZK Historian

Mark Levin, Plymouth Meeting, PA

### AAZK PUBLICATIONS - CONTINUING DATA COLLECTION

Biological Information (formerly Biological Values), 4th Edition - Jan Reed-Smith, Columbus Zoo

AAZK Enrichment Notebook 3rd Edition - Lee Houts, Folsom City Zoo



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30th Anniversary  
1974 - 2004

## *About the Cover.....*

*This month's cover features the original "Zebra and Foal in Caring Hand" logo which appeared on that first tiny issue of Animal Keepers' Forum back in November of 1974. It was designed by Perry LaBelle who, at the time, was a Neighborhood Youth Corps employee at the Como Zoo in St. Paul, MN, and a student at the Art Institute of St. Paul. He later became a keeper at the Como Zoo. From the start the AKF carried the by-words "Dedicated to Professional Animal Care". This logo appeared on the cover of all issues of AKF until 1978 when we began featuring the artwork of keepers from across the country and around the world. We don't know where Perry is now, but we thank him for his wonderful logo which so clearly captured the focus of the Association and the zoo keeping profession - caring for wildlife in a professional and caring manner. Happy 30th Birthday, Animal Keepers' Forum!*

Animal Keepers' Forum publishes original papers and news items of interest to the animal keeping profession. Non-members are welcome to submit articles for consideration. Articles should be typed or hand-printed and double-spaced. Authors are encouraged to submit their manuscripts on a disk as well as in hard copy form. Manuscripts submitted either on disk or electronically as attachments to an email should be submitted in Microsoft WORD. All illustrations, graphs, charts and tables should be clearly marked, in final form and should fit in a page size **no greater than 5.5" x 8.5"** (14cm x 22cm). Literature used should be cited in the text (Brown, 1986) and alphabetically in the final bibliography. Avoid footnotes. Include scientific name (as per ISIS) the first time an animal name is used. Thereafter use common name. Use metric system for weights and measurements (standard equivalents may be noted in parenthesis). Use the continental dating system (day-month-year). Times should be listed as per the 24-hour clock (0800, 1630 hrs. etc.). Glossy black and white **or** color prints (minimum size 3" x 5" [8cm x 14cm] ) are accepted. Clearly marked captions should accompany photos. Please list photo credit on back of photo. Photographs may be submitted electronically as either JPEG or TIFF file attachments.

Articles sent to Animal Keepers' Forum will be reviewed by the editorial staff for publication. Articles of a research or technical nature will be submitted to one or more of the zoo professionals who serve as referees for AKF. No commitment is made to the author, but an effort will be made to publish articles as soon as possible. Lengthy articles may be separated into monthly installments at the discretion of the editor. The editor reserves the right to edit material without consultation unless approval is requested in writing by the author. Materials submitted will not be returned unless accompanied by a stamped, self-addressed, appropriately-sized envelope. Telephone, fax or email contributions of late-breaking news or last-minute insertions are accepted as space allows. Phone 1-800-242-4519 (US); 1-800-468-1966 (Canada); FAX (785) 273-1980; email is akfeditor@zk.kscocmail.com<

**Deadline for each regular issue is the 10th of the preceding month.  
Dedicated issues may have separate deadline dates and will be noted by the editor.**

Articles printed do not necessarily reflect the opinions of the AKF staff or the American Association of Zoo Keepers, Inc. Publication does not indicate endorsement by the Association.

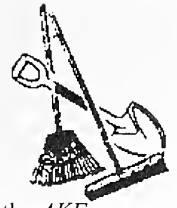
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E-Mail Addresses: You may reach Barbara Manspeaker at AAZK Administrative Offices at: aazkoffice@zk.kscocmail.com< You may reach Susan Chan and *Animal Keepers' Forum* at: akfeditor@zk.kscocmail.com<

**AAZK Website Address: [www.aazk.org](http://www.aazk.org)**

**BFR Website: <http://bfr.aazk.org>**

# Scoops & Scuttlebutt



## From the Editor - Happy Birthday AKF

It was 30 years ago this month that *Animal Keepers' Forum* was first published. The idea for *AKF* grew out of an informal bull session among keepers in the Education Room of the Topeka Zoo. That first issue was produced on an old Gestner mimeograph machine and was a mere 3 1/2 pages in length. At this time the *AKF* was an independent publication, not affiliated with AAZK which, at the time, had an occasional publication known over time as the *AAZK Bulletin* and *AAZK Newsletter*. Actually the *AKF* grew out of an earlier, short-lived "unofficial" newsletter entitled *The Ruptured Rhino*. The intent of this maverick publication was to stimulate the AAZK membership to become more active and participate in the Association at a national level. While those early keeper/editors took some heat from some of the members and were even accused of trying to rupture the AAZK, the responses which arose from it led to the newer publication *The Keeper* and eventually to *AKF*.

The first two issues of the *Forum* (Nov. and Dec. 1974) were sent gratis to all AAZK members with the keepers who originated it covering the costs of production and postage themselves. After the first two issues, *AKF* was sold on a subscription basis at \$5.00 per year. Although originally the *AKF* was printed and sold to members of the AAZK, it didn't become the "official" Association publication until March of 1975.

In the early days keepers at Topeka and at the Como Zoo in St. Paul, MN were involved in its production and distribution. Early issues contained brief zoo news articles, items on legislation and guest editorials. While the early *AKF* did not experience the good fortune of receiving a steady flow of material from members as we do today, they managed by the use of reprint articles, long-distance phone interviews, and much cross-country correspondence to fill the journal's pages with items of interest to zoo keepers.

In January of 1976, *AKF* changed its format from a mimeographed one to a professionally produced booklet style familiar to today's readers. At first it featured the Zebra in Hand logo seen on the cover of this issue. The "About the Cover" section tells more about this design. In 1978 the *Forum* began showcasing artwork submitted by keepers on its front cover. This aspect of the journal has kept it unique among zoo publications worldwide. We have been very fortunate to have been able to feature some outstanding artwork on the *AKF* covers over the years and are grateful to all those keeper/artists who have shared their talents with us.

The first paid staff member came on board in 1977 to help with the typing/editing of the journal. Volunteer keepers were still involved in the planning of the issues and some of its production. The first Excellence in Journalism awards were presented in 1979. The first commercial advertising appeared in *AKF* in 1981.

I came to work as Managing Editor of *Animal Keepers' Forum* in December of 1981. The first issue I ever did was 16 pages in length, was typed on an IBM Selectric typewriter (with no correction key!) and was put together by hand with glue sticks. The *Forum* is now done entirely off a Macintosh computer using desktop publishing software and averages 44 pages per issue. My, how times have changed!

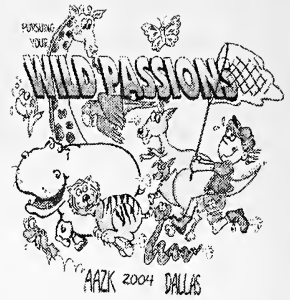
To thank all of the people who over the years have helped in one way or another with *AKF* would allow for the possibility of omission, so I won't even try to do it here. A listing of many of the individuals who were so very important in the evolution of *AKF* were noted in my January 2004 note announcing the beginning of our 30th year of continuous publication.

As I begin to wind down my years as editor for this publication, I do want to thank all of you who have submitted material for publication--from brief meeting notices to full-scale manuscripts. Your willingness to share your professional expertise in many areas has made the *AKF* a learning tool for us all. The test of a true professional is perhaps their willingness to do all they can to improve their chosen profession. Sharing your animal care experiences is certainly one way to do just that. So let's continue to hear from you, and if you have never submitted an article before, make this the year you will do so. Happy Birthday, *AKF*!

---Susan Chan, Managing Editor

### A Final Note from the Dallas Conference Committee

The AAZK 2004 crew hopes that you all had as much fun and more sleep than we did!! Sincere thanks to all the presenters, keynote speakers, sponsors, Chapters, institutions and delegates who contributed to the success of the conference. We were thrilled to have over 200 full conference registrants and a number of daily visitors.



Special thanks go to our Icebreaker hosts at the Dallas World Aquarium, and pre- and post-trip hosts Cameron Park Zoo, Fossil Rim Wildlife Center and Caldwell Zoo.

A reminder that conference photos are posted at [http://www.pbase.com/cwright/aazk\\_dallas\\_2004&page=all](http://www.pbase.com/cwright/aazk_dallas_2004&page=all)

Finally, our gratitude to author Bradley Trevor Greive for his generous donation of the books *The Meaning of Life and Priceless*. Hopefully, they will inspire and motivate everyone to continue *Pursuing Your Wild Passions!*

Laissez le bon temps roulez!

### Advances in Animal Keeping in Zoos and Aquariums

This joint effort by AAZK and AZA is an accredited class as part of the AZA Professional Training Program. Its inaugural year in 2004 was a huge success. There was much gained by the students and instructors alike. Registration is now open for next spring's class to be held April 30 - May 6 in Sacramento, CA.

The goal of the class is to teach the very highest standards in animal husbandry, in combination with problem solving and interpersonal skills, in order to engage, motivate and retain animal care professionals within our industry and to elevate the standards of animal care in AZA zoos and aquariums. A combination of lectures, hands-on workshops, round-table discussion and final team projects will provide an integrated approach to this complex and rapidly changing profession. Topics include: Respective roles of the American Zoo and Aquarium Association and the American Association of Zoo Keepers; Animal Behavior; Handling and Restraint Techniques; Horticulture Introduction; Regulations; Reproduction; Research Skills; Pest and Vermin Control and Sanitation; Animal Shipments; Conservation; Safety; Water Quality; Nutrition; Veterinary Overview; Geriatric Care; Crisis Management; and Animal Welfare.

To find out more about the course or to register go to [www.aza.org](http://www.aza.org). Space is limited and filling fast so don't delay. Don't forget about AAZK's scholarship award for this class, too. All AAZK member zoo keepers and aquarists with three or more years of experience are eligible for this grant. Applications are due by July 1st of the year **before** you wish to attend this course. For further information on how to apply for this grant contact: AAZK Grants Committee Chair, Jan Reed-Smith, [jrsotter@iserv.net](mailto:jrsotter@iserv.net), [jan.smith@columbuszoo.org](mailto:jan.smith@columbuszoo.org), or 12776 Darby Road, Lake Odessa, Michigan 48849. I hope to see you there! ---Kevin Shelton, AAZK Vice President

### Rhino Keeper Workshop 2005: Call for Papers, Posters & Video Presentations

The Workshop will be held 5-9 May, 2005 in Columbus, OH. It is hosted by Columbus Zoo & Aquarium. This is a Call for Papers/Posters/Video Presentations. Deadline for abstracts: **1 January 2005**. Deadline for papers: **1 March 2005**. Abstracts must include: 1) name, address, institution, title of presenter; 2) title, topic, objective, methods, results, and conclusion; 3) Medium (paper, poster, video); 4) A/V requirements; and 5) is limited to 300 words. Interested persons should submit their abstract electronically in MSWord Format to: Adam Felts, Pachyderm Department, Columbus Zoo & Aquarium, 9990 Riverside Dr., Powell, Ohio 43605-0400; [Adam.felts@columbuszoo.org](mailto:Adam.felts@columbuszoo.org) < Phone: (614)724-3413.

### **AAZK Grant Programs**

AAZK has several grants available, including Conservation, Restoration & Preservation (CPR), Research, Geraldine Meyer/AAZK Travel Grant, and the AAZK Grant for the Advances In Animal Training Course offered in conjunction with AZA. For information and deadlines check the AAZK website or contact Jan Reed-Smith at [jrsotter@iserv.net](mailto:jrsotter@iserv.net)<

### **Borneo Rhino Challenge 2005 - Trek, Cycle, and Quest for the Sumatran Rhino of Borneo: May 15-29, 2005**

SOS RHINO invites you to climb to the summit of Mt. Kinabalu, cycle the Northern tip of Borneo, and help us search for the elusive Sumatran rhinoceros of Borneo. You'll see an astonishing variety of rare and endemic plants, primates, and birds during your trek and cycle in some of the most beautiful areas of Sabah, Malaysian Borneo. As part of the challenge you will join SOS Rhino's field staff deep in the jungles of Tabin Wildlife Reserve, in search of the last remaining small, shy forest rhinos of Malaysian Borneo. For more information please visit our web site at: [http://sosrhino.org/programs/challenge\\_index.php](http://sosrhino.org/programs/challenge_index.php) or contact Cindy Salopek, Program Manager by phone: 312.335.0868 or by e-mail: [cindy@sosrhino.org](mailto:cindy@sosrhino.org)< SOS Rhino is a non-profit, international foundation dedicated to preserving the five rhinoceros species in their natural habitats. Our conservation programs combine research, education, marketing and advocacy, all working collectively to achieve sustainable results.

### **Reminder to All Members on PayPal Option**

We want to remind all AAZK members that you can now use PayPal to renew your membership on line at the Association's website - [www.aazk.org](http://www.aazk.org)< You may also purchase current AAZK publications and accessories using this credit card option, hopefully making it easier for you to get the products you want.

### **Zoo Biology Group - A Great Resource for Zoo Professionals**

Need assistance? You could try Zoo Biology, it is probably your best bet for zoo/animal information. Zoo Biology is the original discussion, question and answer group dealing with the diverse range of Zoo Sciences. First established in 1999 the Zoo Biology Group is concerned with all the disciplines involved in the running of a zoological garden - captive breeding, husbandry, cage design and construction, diets, enrichment, management, record keeping, etc. Hediger described zoo biology as "the science which embraced everything which was biologically relevant to the management of the zoological garden." This group is restricted to zoo professionals. It is specifically a forum for professional zoo staff. Exceptions may be considered in the case of students or allied professions. A genuine commitment to both *in-situ* and *ex-situ* conservation is absolutely essential. You are encouraged to copy answers to the group. The useful archive section increases each day. There are 1400+ Zoo Biology subscribers to date and 99% of subscribers have between five and 40 years of practical zoo experience in all areas. An immense combined expertise is waiting to share their knowledge. This group is moderated.

To Subscribe to Zoo Biology send an e-mail to: [zoo-biology-subscribe@yahoogroups.com](mailto:zoo-biology-subscribe@yahoogroups.com)< Leave the subject and message area blank

When you subscribe at the same time please send a separate e-mail to: [peter@elvinhow.prestel.co.uk](mailto:peter@elvinhow.prestel.co.uk) giving your brief bio. (e.g. collection, work area and interests). All details will be kept strictly confidential. Failure to do this will mean that your subscription will not be processed. This step is essential to keep the group restricted to professional zoo staff. To Unsubscribe from Zoo Biology send an e-mail to: [zoo-biology-unsubscribe@yahoogroups.com](mailto:zoo-biology-unsubscribe@yahoogroups.com) Leave the subject and message area blank.

## **MOVING?**

Please let us know when you change your address! It now costs AAZK about \$1.00 every time an *AKF* is returned because of an incorrect address. We have more important things to spend the Association's money on! Please call 1-800-242-4519 (U.S.) or 1-800-468-1966 (Canada). If you should get the answering machine, please speak slowly and clearly when giving your address change. Or you may email your address changes to: [aazkoffice@zk.scoxmail.com](mailto:aazkoffice@zk.scoxmail.com) **THANKS !**

# Coming Events

**6th Annual Association of Zoo and Aquarium Volunteer Administrators National Conference (AZAVA)** - 7-10 November, 2004 in Galveston, TX. Hosted by Moody Gardens. For info contact Tim Racke at [mgvolcoordinator@hotmail.com](mailto:mgvolcoordinator@hotmail.com) or phone (800) 582-4673 ext. 4106.

**Carnivores 2004: Expanding Partnerships in Carnivore Conservation** - 14-17 November 2004 in Santa Fe, NM. Put on by Defenders of Wildlife. For info see [www.carnivoreconference.org](http://www.carnivoreconference.org); or leave a message at (202) 789-2844 ext. 315.

**International Symposium on Construction and Maintenance in Zoos** - 21-24 November 2004 at Zoo Zürich, Zürich, Switzerland. Program, Additional Information, Hotel Recommendations, Registration Forms are available at <http://www.zoo.ch/symposium>

**International Elephant Research Symposium** - 3-5 December, 2004 in Fort Worth, TX. Presented by the International Elephant Foundation and the Fort Worth Zoo This important symposium will concentrate on the research and conservation needs of captive and wild populations of elephants. Interested persons can also contact Tarren Wagener at [elephantsymposium@fortworthzoo.org](mailto:elephantsymposium@fortworthzoo.org) for additional information.

**6th International Aquarium Congress** - 5-10 December 2004 in Monterey, CA. Hosted by the Monterey Bay Aquarium. Additional information in English, French and Japanese is available online at <http://www.iac2004.org>

**2nd Annual Crissey Zoological Nutrition Symposium** - 10-11 December 2004 at the North Carolina State University School of Veterinary Medicine. The primary focus of the symposium & the key note speaker this year will be on carnivore nutrition, however; day two of the symposium will cover all areas of zoological nutrition and therefore all abstracts are welcome. In the spirit of Dr. Susan Crissey, we hope to introduce many students to new areas of nutrition. For more information please check out the website at: <http://www.cvm.ncsu.edu/conted/zoonutrition/>. This website will be updated periodically until the conference.

**Fifth Zoos & Aquariums: Committing to Conservation** - 26-30 January 2005 in Cocoa Beach, FL. Hosted by the Brevard Zoo. This conference will continue to examine and promote the role of zoos and aquaria in supporting *in situ* field research and conservation. Will include keynote speakers, paper sessions, posters. Will be preceded by one-day workshop on North American Conservation Initiatives. For further information please contact Cheri Purnell at (321) 254-9453 ext. 25 or email her at [membership@brevardzoo.org](mailto:membership@brevardzoo.org)

**ClickerExpo** - 28-30 January 2005 in San Diego, CA Three days and 40 sessions on operant conditioning and positive reinforcement. Faculty includes Karen Pryor, Thad Lacinak, Ken Ramirez, Kay Laurence, Kathy Sdao and more. In-depth training for all levels of skill, applicable to many species, including: clicker

training for medical care; for aggression; using cues as reinforcers; shaping behavior at a distance; developing directional and compound cues; chaining; making training plans; and teaching others. Also current related research. A great resource and learning experience for zoo staffers. To see details or register at [www.clickerexpo.com](http://www.clickerexpo.com) or call 781-784-5354 for more information.

**International Association of Avian Trainers and Educators Annual Conference** - 9-12 February 2005 in Atlanta, GA. Hosted by Zoo Atlanta. For more information visit <http://www.iaate.org>

**ABWAK Symposium 2005** - 5-6 March 2005 at Dudley Zoological Gardens. The 2005 Symposium will focus on: "Zoos - Theory & Practice" and include a range of presentations and workshops covering topics such as: nutrition; conservation (including EAZA Shellshock Campaign); public presentations/keeper talks; interpretation; enrichment and training. ABWAK members benefit from reduced fees; there is also a discount for early booking (before 15th January) Members early fee £30, Non-members early fee £35. To register/book for the symposium contact: Laura Gardner, ABWAK Hon. Secretary, Leeds Castle Aviary, Leeds Castle, Maidstone, Kent, ME17 1PL, UK. Information on Dudley and special accommodation deal is available from Stephen Woollard at [education@dudleyzoo.org.uk](mailto:education@dudleyzoo.org.uk)

**Fourth Sea Otter Conservation Workshop** - 18-20 March 2005 hosted by Seattle Aquarium, Seattle, WA. Three days of papers, reports and discussion about all aspects of sea otter biology and conservation. Anyone working with sea otters in any capacity is invited to come. Pre-registration is required; discount for early registration (deadline 18 Feb. 2005). Pre-registration until 11 March 2005. Info, registration and/or questions contact Dr. Shawn Larson at [shawn.larson@seattle.gov](mailto:shawn.larson@seattle.gov)

**The 5th Animal Behavior Management Alliance Conference** - 10-15 April 2005 in Houston, TX. Hosted by the Houston Zoo. For more info visit [www.theabma.org](http://www.theabma.org)

**Fourth Rhino Keepers' Workshop** - 5-9 May, 2005 in Columbus, OH. For further information contact Adam.felts@columbuszoo.org

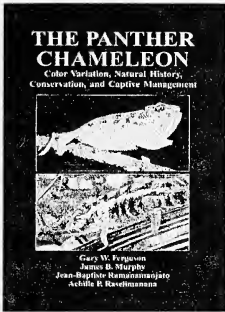
**The 7th International Conference on Environmental Enrichment** - 31 July - 5 August, 2005 in New York City, NY, USA. The conference is hosted by the Wildlife Conservation Society (WCS) and held at Columbia University. Theme is "Unifying the Art and Science of Animal Enrichment". For more information contact [ICEE2005@wcs.org](mailto:ICEE2005@wcs.org)

**Second International Congress of Zookeeping (ICZ)** - May 2006 in Gold Coast, Queensland, Australia. Visit website: <http://www.iczoo.org> for latest information. See information on First Call for Papers elsewhere in this issue of *AKF*.

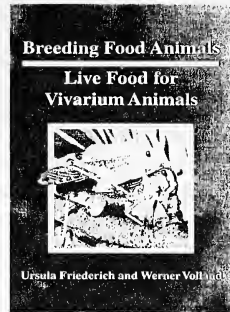
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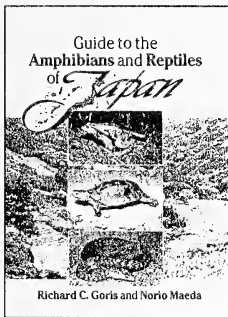




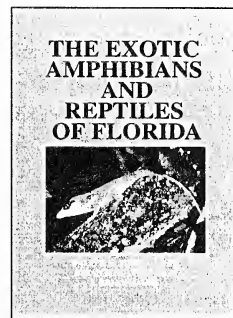
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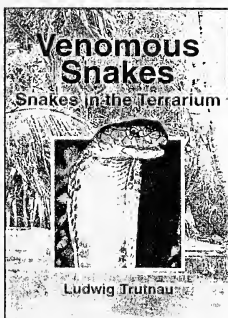
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# *Assistance Request*

This is an appeal for some stalactite material from cement basements or crawl spaces under old elephant or other animal areas where "soda straw" stalactites have developed.

Although coprolites (fossilized feces) are well known, urolites (fossilized urine) is currently unknown. Recently some calcium carbonate minerals have been found that may possibly prove to be urolites (fossil urine). Their C14 date is 9,535 years before present, but attempts to conclusively link these minerals to urinary origins has proven to be elusive. Currently, molecular analysis of the suspected urolite material, adjacent sand matrix and urine samples has been conducted as a courtesy by a team of BP-Amoco scientists. Although these studies indicate some biological basis for the minerals, a conclusive link between the sample and the urine has been elusive. More study is needed and perhaps the reader can help us. In the field, these minerals occur as isolated stalactites and were found in sandy deposits in part of an unglaciated Alaskan corridor that served as a migration route for many large herbivores including mammoth. Archeological investigations of prehistoric hunting sites are currently under way. Based on my years of animal experience, the shapes of these deposits closely resemble urinary patterns in snow or sand when produced by ungulates and other large mammals.

To assist in this attempt to link urinary evidence to these minerals, we are appealing for "soda straw" stalactites (or leachings of any shape) that are infrequently seen hanging from cement ceilings of basements or crawlspaces beneath animal enclosures in zoos, old dairy barns or stalls. These shapes tend to grow at very inconsistent rates; more or less a centimeter in 3-10 year periods. Ideally we are in need of two (2) samples; one that has been contaminated by animal urine over the years and another uncontaminated but formed within the same cement structure.

Wherever located, we would request permission from that institution's administration to obtain the needed sample(s). All persons and institutions assisting in the effort would be clearly credited. Please contact Ray Pawley with any suggestions/comments or for more information at P.O. Box 218, Hinsdale, IL 60522, USA, or email: raypawley@core.com; or fax at (708) 445-8311. Thank you very much. ---Ray Pawley

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## **Have You Purchased Your Enrichment or Biological Information CD Yet?**

Following the recent release of the Third Edition of the AAZK Enrichment Notebook (CD), review copies were sent to several people so they could give the CD a try and see what they thought. Peter Dickinson, editor of *ZooNews Digest* out of the United Kingdom, had the following to say about this new resource - "I have spent an enjoyable past two days exploring this CD. Over the past few years I have extensively read enrichment papers and books both in paper and web format and this one takes the biscuit. It is the best I have come across so far. Certainly a very worthwhile addition to every zoo library. If you have no enrichment literature then this should be your first purchase. If you have a big enrichment library then this needs to be your next purchase! Buy it!"

We are pleased that Peter found this CD so worthwhile and for allowing us to share his comments with you. Order forms for the Enrichment Notebook CD, as well as the Fourth Edition of the Biological Values Information on Selected Mammals CD, are available at the AAZK website ([www.aazk.org](http://www.aazk.org)) and order forms appear in this issue of *AKF*. Both CDs may also be ordered by phone from Administrative Office using a MasterCard or Visa. Cost for each is \$25.00 for AAZK members and \$40.00 for nonmembers. Prices include domestic and Canadian shipping. To order by phone call 1-800-242-4519 (US) or 1-800-468-1966.

# AAZK Announces New Members

## New Professional Members

Jennifer Skelley, **Prospect Park Zoo (NY)**; Gail Tabone, **Seneca Park Zoo (NY)**; Layla Dampier, **Jacksonville Zoo and Garden (FL)**; Kari DeBoskey, **no zoo listed (Wesley Chapel, FL)**; Amanda Carroll, **no zoo listed (Wauchula, FL)**; Heather Marshall, **Disney's Animal Kingdom (FL)**; Heather Dunn, **Columbus Zoo (OH)**; Vicky Croisant and Jean Leonhardt, **Akron Zoological Park (OH)**; Tomi Jo Doty, **no zoo listed (Madison Heights, OH)**; Nicole Hoffmann and Holly Richards, **Brookfield Zoo (IL)**; Suzanne Kania, **no zoo listed (E. Dubuque, IL)**; Rebecca Van Beek, **Sedgwick County Zoo (KS)**; Erica DeGeus, **Oklahoma City Zoo (OK)**; Amanda Sternke, **Tulsa Zoo (OK)**; Kenneth Billin, **Houston Downtown Aquarium (TX)**; Brandy von Weissenstein, **Utah's Hogle Zoo (UT)**; and Amy Costa, **no zoo listed (Glendale, AZ)**.

## Renewing Contributing Members

Steve H. Taylor, Director  
Cleveland Metroparks Zoo  
Cleveland, OH

A.J. Higginbottom  
HMS Zoo Diets, Inc.  
Bluffton, IN

*(PLEASE NOTE: If you joined or renewed via the AAZK website and used PayPal, please be aware that we do not receive your zoo affiliation information from PayPal, only your mailing address. If you want your zoo listed with your name when it is published in AKF, please contact our office after you join/renew online to advise us of this information. Call 1-800-242-4519 (US) or 1-800-468-1966 (Canada); or email at [aazkoffice@zk.kscocmail.com](mailto:aazkoffice@zk.kscocmail.com) < Thank you.)*

# Block These Dates! 7-11 May 2006



The Australasian Society of Zoo Keeping (ASZK) wishes to invite you to the 2<sup>nd</sup> International Congress on Zookeeping (ICZ) to be held on the **Gold Coast, Queensland, Australia**.

Hosted by ASZK in conjunction with the following Zoo Keeper Associations: ABWAK, (Britain), AAZK, (America), AICAS, (Spain), AFSA, (France), BdZ, (Germany) and De Harpij, (The Netherlands), further information can be obtained by visiting <http://www.iczoo.org> or to receive regular updates subscribe to [ICZ\\_News-subscribe@yahoo.com](mailto:ICZ_News-subscribe@yahoo.com) or write to ICZ Conference Convenor c/o ASZK, P.O. Box 248, Healesville Vic, AUSTRALIA 3777.

Look forward to seeing you there!!



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# ABC'S

## ABC's: Animal Behavior Concerns and Solutions

*A Question & Answer Forum for Animal Professionals*

©2004 by Diana Guerrero, Independent Behavior Consultant  
Ark Animals of California, Big Bear Lake, CA



### **Animal Training 101: Training is Training (Part Two of Two)**

#### **Question**

I have been a canine trainer and have recently started working with equines. Can you tell me if they have the same type of drives useful for training as outlined for canines?

#### **Answer**

*Drive is an archaic term no longer used in the professional behavior realm. This month the answer continues with the identification of animal social styles.*

Last month I mentioned the use of animal social styles to gain an edge in training. In the 1990's my first works on animal social styles were published in the pet industry and in my former column of the Elephants Managers Journal. I have since refined my social style interpretations and the physical traits that accompany them. Over the past ten years or so, the primatology field has also ventured into personality typing strategies for non-human primates. The following excerpt is reprinted here from my 2003 book chapter called, "Wisdom of the Owl." Traits and definitions remain consistent across species.

*Humans relate to the world through different personality styles. Described through the ages, one of the more enduring theories came from Galen, a Greek physician. He grouped the personality traits by body fluids: sanguine (blood), choleric (yellow bile), phlegmatic (phlegm), and melancholic (black bile). Although this theory might sound a bit archaic, it influenced modern theorists.*

*For instance, Alfred Adler, a physician turned psychiatrist, related these types to his four personality categories. Even today, management and behavior professionals categorize the same personalities or social styles by other names. What is interesting is that I see the same four general categories exhibited in animals as well.*

*Each animal has specific personality traits, much like humans. These traits vary between individuals and from one species (or breed) to the next. I'd like to say I discovered this, but Ivan Pavlov (famous for his work with classical conditioning, which caused dogs to salivate when they heard a bell) used Galen's theory to describe dog personalities when he presented his work on conditioned reflexes back in 1927. Before I read his article, I worked with my own category names, and so I'd like to share them with you here. These categories apply to all animals, not just the world of canines. Animals can also exhibit the traits of more than one category.*

#### **Animal Social Styles**

*My work with animal social styles began in 1990. Because the knowledge of human social styles assisted me in my work with pet owners and in my management roles, I assumed that identifying the same trend in animals would increase the likelihood of successful training of animals of all types.*

*These categories are those that I named for ease of identification. Just as with humans, all animals have shades of the different categories.*

### **Hyper-sensitive**

*Once alarmed, hyper-sensitive, or fear-reactive animals cease to respond normally. These animals depend on another animal or human for guidance. Slow learners, they work best with calm, clear directives, and slow deliberate steps. Harshness or excessive reassurance does not work since they shut down and become unable to perform; in worse cases, they panic. These critters do better in unhurried, predictable routines and with gentle training programs.*

*Physical traits of these animals include longer features and narrow builds. Fear-aggressive dogs, animals who retreat or hide from new people or experiences, or who lash out when cornered or trapped, compose this group. They are slow or hesitant, seek to please, and are extremely devoted.*

### **Determined**

*Bright determined creatures constantly push to see what they can get away with. Quick to learn, their goal is to achieve the dominant role within the home or animal group. They exhibit aggressive movements or assertive performances, but with proper guidance become great companions or working animals. If not directed, they are a handful. These animals do better with variety and unpredictable training sessions. If given the opportunity, they often “train the trainer” or perform the bare minimum. Consistency and persistency is critical for success with these critters.*

*The physical characteristics in this category consist of taut body compositions and strong muscular builds. Offensively aggressive, these household animals boss their humans around. Moderate to extreme behaviors include: nudging to play, rushing through doors first, demanding food, body slamming, and bumping.*

### **Placid**

*Secure creatures, placid animals are always ready and willing—especially with a motivational push. These animals seldom attend training class, because they cooperate and cause little trouble. When describing these animals people say, “My pet is an angel, we never have any trouble.” In diverse collections they are confident or more experienced critters. They never seem to get out of hand.*

*Instead of tense musculature, the physical qualities of these animals include a healthy glow and fuller features. Communication channels with these animals are good. With training, many out of control animals, along with their owners, mold to fit into this category.*

### **Hyper-responsive**

*Swift responsive animals are sensitive, want to please, and can learn many behaviors quickly. They work and perform well, and subtle actions trigger their behavior. Human eye contact, posture, or verbal attention (good or bad), can actually reinforce hyper-behavior.*

*The physical tendencies of these creatures include delicate features and smaller dimensions. Fast to learn and fast to respond, these animals perform intricate tasks and behaviors. Rapt attention from humans is necessary since these animals anticipate requests and respond accordingly.*

Are you a reader with a question? Be sure to submit it—and good luck in all your training endeavors!

(About the columnist: Since 1978 Diana L. Guerrero has worked professionally with both wild and domestic animals. Guerrero has been affiliated with and certified by a variety of animal programs in the USA and Europe. Based in California, she writes, consults, and leads safaris. Information on her animal career programs, training courses, and her newest books, including *What Animals Can Teach Us about Spirituality* (SkyLight Paths, 2003), are available through her website [www.arkanimals.com](http://www.arkanimals.com). Questions for ABC’s should be submitted to Diana by phone at (800) 818-7387, directly through the ABC’s questionnaire on her website, via email [zooit@arkanimals.com](mailto:zooit@arkanimals.com), or through regular mail: ARKANIMALS.COM, PO Box 1989-215, Big Bear Lake, CA 92315 USA).

# AAZK Enrichment Notebook, Third Edition CDROM Version

*A product of the American Association of Zoo Keepers, Inc.*

This 455-page publication includes many facets of animal enrichment and is indexed for easy reference. The sections include an Overview of Enrichment, Enrichment Links, Enrichment Suppliers, Suggested Guidelines (Bats, Bears, Birds, Carnivores, Fishes, Primates, Reptiles, and Ungulates), Safety Considerations, Lists of Browse Plants and Toxic Plants, Cookbook Recipes for Enrichment, Enrichment Ideas/Devices (organized by category), Sample Enrichment Forms currently used in zoological facilities, and an extensive Enrichment Bibliography. This is a searchable PDF format document utilizing Acrobat Reader which is included

## AAZK Enrichment Notebook Order Form

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I wish to order \_\_\_\_\_ copy (ies) of the AAZK Enrichment Notebook, 3<sup>rd</sup> Edition

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*Price includes Domestic and Canadian First Class Postage. Overseas orders should add \$5.00 per CD for Air Mail Postage.*

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# *ABMC Gets a New Name! An Update from the AAZK Animal Training Committee*

*submitted by Angela Binney, Committee Co-Chair  
and Keeper, Disney's Animal Kingdom*



The Committee formerly known as the Animal Behavior Management Committee, or ABMC, is starting the new fiscal year with a new name! However, the Animal Training Committee plans to move forward with the same great quality service, providing a variety of animal training resources.

In addition to the name change, a change of officers took place October 1<sup>st</sup>. Beth Stark of the Toledo Zoo, who was the originating committee chairperson, passed the torch of leadership on to two committee members. Kim Kezer, of Zoo New England, and Angela Binney, of Disney's Animal Kingdom, will now co-chair the committee. Kim and Angela both look forward to the opportunity to lead the committee into fiscal year 2005.

At the AAZK National Conference, held 26-30 September in Dallas, TX, the committee held open and closed meetings to action plan for the upcoming year and conducted their annual animal training workshop. This year the workshop was entitled: *Animal Trainers Open Mike Night: Learning From Each Other*. This open forum was designed to facilitate keepers learning from the experiences of their peers and to share best practices. It also allowed keepers to make connections for future information exchange. The roundtables, which were arranged by taxon groups (ungulates, primates, carnivores, birds, and miscellaneous), were well-received according to workshop evaluations. Thirty-seven of 40 respondents indicated that they had an improved comfort level with animal training techniques after attending this workshop.

Participants were asked to rate the room setup, objectives/agenda, facilitation style, training topics, and session length using a 1-5 system (5 being highest level of approval). All of these had a mean score above 4. An increase in skill level/knowledge of material was indicated with a mean score of 3.2. Roundtable topics were chosen by participants and ranged from basic to advance medical behaviors to aggression and management issues.

Topics discussed at the open and closed committee meetings focused on current and future project planning. Ongoing projects discussed were: committee web page updates, updates to the bibliography and resource list, further development of the *AKF* committee column, as well as planning more great workshops to be held at future annual AAZK Conferences (including the August 2005 conference in New Orleans).

Additionally, some fresh ideas surfaced including:

- Designing a header or logo for this column
- Development of a Mission Statement for the committee
- New column topics (look for these in future volumes of AKF!)
- Teaching Basic Training Methods semi-annually at conference
- Possible development of a Basic Training Methods Video (this idea is pending and will require logistical evaluation)

A suggestion to develop a DVD of committee resources was discussed. However, because our goal is to provide these online at [www.aazk.org](http://www.aazk.org), the committee felt it would be most productive to focus on new resources in 2005.

Along with these fresh changes, the committee membership is changing as well. Roby Elsner of the Louisville Zoo, announced his 'retirement' from the committee in September. Roby has given five years of service to the Animal Training Committee and has been instrumental in the development and implementation of many projects. In addition to assisting with workshops, he developed the Animal Training Bibliography and assisted in formatting it to a searchable database (soon to be posted on the website). He also partnered with former committee member Wendy Schaffstall of the Kansas City Zoo, to develop the Animal Training Database Survey (developed in 2000 and 2001, circulated to AZA institutions in 2003). His service to the committee is priceless. We must, however, move forward with the new year, which brings us to the following announcement:

**Animal Training Committee Seeks New Member!** Desired qualities include: a demonstrated understanding of animal training techniques, including operant conditioning; several years of experience training animals, preferably in a zoological or aquarium setting; an ability to communicate effectively and to facilitate learning through writing and workshop development and implementation. Institutional support is not mandatory, but is helpful to both the new member and the committee. Interested keepers should send a letter of intent and cover letter to Kim Kezer at the following email address: [kim@kezer.net](mailto:kim@kezer.net). The deadline for application is December 31<sup>st</sup>, 2004.





# ***Bowling For Rhino (BFR) Update***

*from National BFR Chair Patty Pearthree*



Another successful year! All of you have now raised over \$2.1 million since 1990. As of October 10<sup>th</sup>, we had raised over \$193,000.00 for 2004 BFR with several Chapters remaining to turn in funds. We have broken our record!! Thank you for all your work and support!

*The following are the top two money raisers in the U.S. and Canada and each wins a free two-week trip to Lewa Wildlife Conservancy in Kenya:*

- 1) **Todd Bridgewater** from Oklahoma City with \$ 17, 680.00 (**record amount!**)
- 2) **Michelle Pratt** from Detroit with \$ \$13,435.00

*The next two top money raisers win the free two-week trip to Indonesia sponsored by IRF:*

- 3) **Bethany Lutz** from Utah's Hogle Zoo with \$12,000.00
- 4) **Mike Connolly** from Tulsa with \$ \$6,000.00

The International Rhino Foundation has pledged to make these annual prizes. Trip winners must raise at least \$1,000.00 to be eligible.

***Top Money Raising Chapter: Detroit AAZK Chapter with \$ 19,494.00 - this is a record amount!***  
Bravo to each and every one of you for making BFR successful! We certainly had an Olympic year with all our record breaking!

## **New for 2005:**

The first \$120,000.00 raised each year from Bowling For Rhinos will go to Lewa Wildlife Conservancy (previously was \$100,000.00) in Kenya. The remainder will be sent to the Indonesian Parks through the International Rhino Foundation (IRF) & Minnesota Zoo Adopt-A-Park Program. **If** we reach the \$200,000.00 mark, any amount above \$200,000.00 will be split 75/25 between Lewa/Indonesian Parks.

BFR will soon be registered with MissionFish.org. They are linked to eBay. When people sell items on EBay, they have the option of donating all or part of the selling price to registered not-for-profit organizations. So keep BFR in mind when selling on eBay!

Ros Hill has graciously agreed to design a BFR T-shirt for us. Chapters will have the option of using his design for their BFR event or using their own design. See <http://www.hillustrations.com> to view his current artwork.



# REACTIONS

## *A Question and Answer Forum for the Zoo Professional on Crisis Management*

*By William K. Baker, Jr., Curator  
Little Rock Zoo, Little Rock, AR*

### **Question**

What criteria should be used when selecting staff for an Emergency Response Team?

### *Comments*

The selection of personnel for an Emergency Response Team (ERT) or Crisis Management Team (CMT) will always be a trying and difficult process for zoological institutions. In truth, there are numerous ways to approach this, but unfortunately there are no clear guidelines.

For example, the selection process is not dissimilar to that of how facilities develop their contingency or emergency response plans. Most are developed in-house and typically incorporate the ideas and concepts of the institution's staff. At the same time Directors and Curators may solicit comments from their peers working at other facilities, in many cases even modeling their plans off the existing framework of another institution's existing plan.

So, having said this, the question still remains, "How do you select personnel?" For myself, I have always taken the approach that you have to have two key components: One, a person must have a genuine desire to participate in this type of situation and willingly volunteer for it. Two, they must have a stable attitude and personality.

First point, in my experience the actual desire to participate in a crisis support role is a critical component not only to the training process, but also to the actual application of the team when it is deployed in a crisis. The reasoning for this is that if a staff member is assigned, then their heart is not usually in it. Also, not every person is psychologically capable of dealing with the ramifications of taking an animal's life, especially one that has been under their care for many years. This can lead to hesitation at a critical moment during a crisis, and that is simply not an option.

Second point, the last thing you want is someone of questionable character, stability, or judgment dealing with a crisis situation. Perhaps the better way to explain this is with one of my catch phrases, "You can teach a technical skill such as marksmanship or darting, but you can't teach common sense." Where this perception comes from is that you can develop an emergency escape or crisis plan, but rarely do they survive first contact with any situation. As a result, you empower your staff members with the flexibility to respond to a crisis and, of course, you expect them to use good judgment in the process.

Conversely, personal experience has taught me that even when you have someone who volunteers for this type of duty, seems to have a level head, and even previous shooting experience, you can be surprised. In one particular experience that is exactly happened to someone who was on my team during a Code Red escape many years ago. To be honest, they couldn't handle the stress of the situation and just lost it. In another situation years ago, I had someone who was extremely "gung ho" and was looking for a self-esteem boost and searching for glory. And as a result, that person never even made it on the team. My attitude is that you are trying to resolve a crisis, not escalate it into a war.

The best advice I have out of all of this is four general guidelines:

1. Don't accept anyone on your team unless all of the current team members unanimously vote to give him or her a try.
2. Always accept that person on a probationary basis of say, six months, and also make sure that they can meet your qualification criteria and show consistent improvement and growth.
3. Think about psychological profiling or testing to establish who you're dealing with. One of the more reliable tests is known as the Cognitive Style Inventory that verifies your Myers-Briggs personality type. The best way to understand your personality or psychological type is to take an official MBTI<sup>®</sup> (Myers-Briggs Type Indicator) instrument from a professional who has met the standards necessary to administer the test. An excellent resource for qualified persons is the **Association for Psychological Type**.
4. Always check with your Human Resources Department to establish what you can and can't do in keeping with standardized policies and procedures. Also, your HR Employee Assistance Program (EAP) most likely can facilitate the screening process as well.

### Question

I realize this isn't really a zoo safety question, but can you tell me what you look for in an interview? Also, what was the best interview that you have ever been through?

### Comments

I'm currently developing a paper on interviewing and career building with the working title of "Professional Development in the Zoological Industry". As to the best interview, that's easy, the Living Desert in California is definitely one of the most professional institutions I have ever visited in my career. It is also one of the most unique zoological facilities with its naturalistic development style.

**Next Month:** When designing an elephant facility are there any specific safety recommendations to keep in mind?

**If you would like to submit a question for this column or have comments on previously published materials, please send them to AAZK, Inc., 3601 S.W. 29th St., Suite 133, Topeka, KS 66614 Attn: Reactions/AKF**

*(About the Author: Since 1985 Bill has been active in the fields of science, zoology, and wildlife management. His education and experience include a B.S. in wildlife management and post-graduate studies in zoology, Lab and Museum Assistant, Shoot Team Leader, ERT Member, Large Mammal Keeper, Senior Keeper, and Zoo Curator at various zoological facilities. His area of research is crisis management in zoological institutions, which draws upon practical experience and training as a Rescue Diver, Hunter Safety Instructor, NRA Firearms Instructor, and Red Cross CPR/First Aid Instructor.)*

Just Released.....

***Biological Information on  
Selected Mammals 4th Edition  
CDROM Version***

*A product of the American Association of Zoo Keepers, Inc.*

The 1,396 page *Biological Information on Selected Mammal Species* CD covers a wide range from general, breeding, and young-rearing behavior to diet and physical descriptions of 590 species. The volume is in a PDF format allowing searches by Species (Common or Latin name); or Key words using the *Find* function; or by Species (Common or Latin name), Family; or Order using the *Bookmarks*. Table of Contents are given for Orders, Families, Species by Common Name, Species by Scientific Name, and Species by Order and Family. The Appendices cover a variety of information from behavioral patterns common to families (Bovid displays) to taxonomy (Primates). References are listed by Order and Family.

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# International Congress on Zookeeping



Global Networks – Animal Welfare – Husbandry – Conservation – Professionalism - Knowledge

## The 2nd International Congress on Zookeeping

### Gold Coast, Queensland, Australia

7th – 11th May 2006

#### First Call for Papers/Posters and Workshops

After the success of the 1<sup>st</sup> conference in 2003, a second conference will be held in Australia in 2006 with more than 300 zookeepers from around the world expected to attend. The conference will cover all areas of Zookeeping.

You are invited to submit an abstract of a paper or presentation you would like to give. More information and guidelines can be found at [www.iczoo.org](http://www.iczoo.org)

Abstracts for oral and poster presentations should be written in English and be no more than 600 words long.

If you want to run a workshop focused on developing zoo keeper skills please send a short description.

These should be sent to: Paul Howse, ICZ Programme Committee at [p.howse@chesterzoo.org](mailto:p.howse@chesterzoo.org)

Preferably in RTF or MS Word format marked 'ICZ Programmme'

**Deadline for submissions is 30th September 2005**

# Four Faces of Operant Conditioning

By Jay Pratte, Giant Panda Keeper  
Zoo Atlanta, Atlanta, GA  
AAZK, Inc. Animal Behavior Management Committee

Operant Conditioning is a type of learning, or training, in which behavior is determined by its consequences. Over the past few years, it has evolved into an integral animal management tool in zoos and aquariums. Many facilities have developed training programs for their staff and animals. Keepers possess varying levels of skill and dedication in this burgeoning branch of husbandry, but one thing remains unchanged at the root, and that is the theory and knowledge behind the training itself. Granted, new developments abound in psychology, however the basics of operant conditioning are fairly simple and stable.

Several conversations over the past year have demonstrated that there is a need to educate individuals further in the theory behind operant conditioning - not only to provide further clarification of the processes involved, but also to assist people in communicating more successfully with others in the field by maintaining consistency in terms and applied theory. Animal care managers are becoming increasingly responsible for addressing training programs and for assessing performance of staff and animals alike. These functions are difficult without the intrinsic facts at hand. The facts? Essentially, operant conditioning ("training") as it is used in zoos and aquariums, includes four major facets: *positive reinforcement*, *negative reinforcement*, *positive punishment*, and *negative punishment*. In animal training (using operant conditioning), these four concepts are used constantly, whether the trainer is aware of the terminology or not. Each term is clarified further below. This paper does not address other mechanics of conditioning (discriminative stimuli, conditioned reinforcers, schedules, etc.), but expounds on the practical applications of punishers and reinforcers.

In regard to operant conditioning, *positive* and *negative* have nothing to do with perception or how a subject responds. It is not "good" versus "bad". Think of it in terms of math. Positive means something is being given or added; negative means that something is being avoided or removed. Simple, but often forgotten or misinterpreted by many trainers.

## Positive Reinforcement

By definition, a reinforcer is anything that occurs in conjunction with a behavior that tends to increase the likelihood that the behavior will occur again. That said, **positive reinforcement** is the process of pairing an action or response with something that the subject wants, thereby causing an increase in the frequency of occurrence of that behavior. For example, ask dog to sit, dog sits, dog is told "good" and receives a treat. **Positive**, since something is given or added, and **reinforcement**, since what is given is meant to increase the chances of the response occurring when the trainer asks. Positive reinforcement can be slow in providing results, but usually results in fewer adverse side effects than the other facets (e.g.: displacement), which will be discussed. Positive reinforcement also has the psychological benefits of being based on a system of rewards. Animals and people alike respond well to a reward system. Administering the reinforcer and enjoying the results can be as rewarding for the trainer as receiving the reinforcer is for the trainee.

## Negative Reinforcement

This is the villain that triggered this article. The term's confusion arises from the belief that it is somehow "bad", since it *is* "negative" in name. Many trainers suffer this misconception and a stigma is assumed if it is actually used. As a result keepers are less willing to discuss how and when this technique has been employed. The need to apply an "aversive" environmental factor can be

distressing, and misinterpreted by those less versed in methodology. Education and communication can easily help one overcome these barriers and promote understanding.

**Negative reinforcement** is the process in which a behavioral response increases in frequency (and thus the **reinforcement**) due to the removal (thus the **negative**) of a stimulus that the subject perceives as aversive. This sounds paradoxical, but it is really quite straightforward. For instance, a bear won't shift when asked, so a short burst of water is used as an aversive environmental factor, or aversive stimulus. The bear decides to shift *to avoid being sprayed*, and thus is reinforced by the cessation of the aversive stimulus of the spraying. The desired behavior (shifting) is more likely to occur once the association is established. The most important thing to remember here is that the trainer is providing concise information. Continuing to hose the bear until it is soggy after it has begun to shift does not send the correct message. In the case of a trained behavior (i.e. under stimulus control), if the aversive stimulus stops immediately when the cue is appropriately responded to, then the subject learns that obeying the cue is good. It is also important to remember that a behavior trained using negative reinforcement can be maintained by using positive reinforcement. Once the desired behavior has occurred and the aversive factor is gone (i.e. the bear shifts on cue before the water hose or spritzer is even visible to it), the subject can be positively reinforced to further strengthen the behavior.

This is not to espouse the use of negative reinforcement over positive reinforcement. There are appropriate times to utilize this training tool, often dictated by circumstance or situation. It is merely another method of providing information to the subject. It can be, however, a less than optimal method as subjects may react to the aversive stimulus with displacement of aggression, or some other less desirable physical or psychological consequence. Negative reinforcement is not, in and of itself, a bad thing; it is merely a tool to be used appropriately. Avoiding communicating about how negative reinforcement has been used effectively as a training tool (due to potential adverse perception) can result in confusion about, or an incorrect assessment of, a training program's success.

### **Positive Punishment**

Punishment is the application of or removal of a stimulus that occurs after a behavior it is meant to affect, and causes a decrease in the frequency of that behavior. This concept is simple to understand, and most trainers recognize that it is a tool, just one to be employed carefully. It is also a great example to illustrate how easily the terms can be misconstrued. **Positive punishment** is the providing of (again, adding, and so **positive**) an external stimulus in order to decrease the frequency or occurrence of the associated behavior (thus punishment); the associated behavior in question being the undesirable response. (Remember, the term "reinforcement" refers to the intent of increasing the frequency of a desired behavior occurring.) For example, a dog is given a cue; the dog, instead of offering the corresponding behavior, tries to snap the treat (intended positive reinforcer) from the trainer's hand, so trainer decides to "correct" the behavior by yelling loudly at the dog. The undesirable snapping behavior is likely going to decrease, but the dog is also likely to be wary of the trainer and may shy away from any loud noise/voice. The subject can make an association, and learning may occur, however not by a method either the trainer or the subject would desire.

Any type of punishment can result in distressing consequences. Fear responses and aggression are potential examples. Positive punishment does not benefit the trainer or the trainee. However, it is still termed "positive", thus rendering the terminology confusing and affecting individuals' perceptions (yet ultimately providing the impetus for addressing the issue.)

### **Negative Punishment**

This facet of operant conditioning is an excellent example of how *perceptions* of ideas affect the employment of a tool. **Negative punishment** is the removal of (**negative**) an external stimulus, and, like positive punishment, is intended to decrease the frequency of an undesirable behavior (**punishment**). For example, a bear won't respond to a cue (or is overly aggressive...) so the trainer turns or walks away, removing any potential for the bear to receive further attention or positive

reinforcers/treats. The clearest and most commonly practiced example of this concept is the use of TIME-OUTS. Many trainers use time-outs with some regularity, but some do not understand that they are actually employing a mild form of punishment - again, with all of the potential psychological side effects that may result from the use of punishment techniques (frustration, displaced aggression, etc.). One of the motivators behind this article was a dispute between two trainers over the use of negative reinforcement in one particular training situation. One trainer did not like the concept of negative reinforcement and argued against using it, while extolling the virtues of time-outs, never once realizing that time-outs are, by nature and definition, actually punishment and therefore a less desirable choice. Negative punishment is, again, a training tool to be used appropriately and effectively, but in practice a less desirable one.

General practice accepts that positive reinforcement is one of a trainer's most effective tools. Any type of reinforcement is preferable to punishment and likely more effective in eliciting desired behaviors. While positive and negative punishment may elicit more (apparently) immediate and changes in behavior, positive reinforcement sends the clearest and strongest message of association to the subject, while maintaining a rewarding relationship.

Finally, a couple of points on using punishment as an operant conditioning tool: To be employed appropriately, the punishment must occur as immediately as possible to send the correct message. The greater the delay between the undesirable behavior and the punishment, the greater the chance of misinterpretation of intent. A dog owner calling the dog over and spanking it an hour after it urinated on the floor is, in reality, punishing the dog for coming to him or her. Animals in particular are unlikely to associate a past behavior with the current punishment. The intent of the trainer therefore should be to provide a response as closely as possible to the behavior in order to strengthen associative learning (which is why reinforcers tend to be more effective than punishers in modifying behavior). Any punishment must also be appropriate in "volume" in relation to the undesirable behavior. A time out given when the subject is merely slow to respond may not be warranted, nor is merely using a sterner voice if the poodle being trained bites off a finger. Again, remember that positive reinforcement techniques are the most effective for associative learning; that said, punishment is still another facet/tool of operant conditioning, and needs to be properly understood and carefully employed only when absolutely necessary.

Remember that since punishment occurs *AFTER* a behavior has occurred, the subject cannot alter its response (change its behavior) accordingly to avoid it. The use of punishment can lead to and increase in both the trainer's and the subject's frustration, and result in less than successful conditioning. The point of conditioning is to modify a subject's behavior in the desired direction; the training will likely be more successful when the subject can alter its behavior and receive a positive reinforcer from the trainer. There is almost always an alternative to punishment. If something is occurring that the trainer finds undesirable, training an incompatible behavior (i.e. training a dog to sit so it cannot jump up and lick someone's face) using positive reinforcement can be a useful solution. Putting a behavior on cue and then never asking for it again can be an alternate solution if the situation lends itself to that, as can extinguishing the undesirable behavior by never reinforcing it so that it eventually dies out.

In conclusion, operant conditioning is not just about positive reinforcement. It entails learning about and employing these four techniques (and many others) appropriately and safely. Learning about these mechanisms of the psychology, as well as the potential results or consequences of chosen techniques, will increase a trainer's effectiveness and improve how quickly and well the subjects learn new cues/behaviors. Teaching these skills to new trainers and discussing them openly with experienced individuals can lead to more consistent communication between trainers, trainers and their subjects, and between trainers and those managing the training program. A little bit of knowledge will go a long way to improving one's skills in operant conditioning.



# Chapter News Notes

## San Diego AAZK Chapter

Over the last several months, the San Diego AAZK Chapter has achieved a great deal. Most notably, we proudly raised almost \$10,000 for this year's Bowling for Rhinos! With a delicious bake sale, over 100 significant raffle prizes and silent auction pieces, it was hard not to have a blast! We held another fundraiser recently at the Kobey's Swap Meet, raising almost \$900.

Educating our members with a variety of speakers has kept us busy. At our annual social "Evening at Joan Embery's Ranch," our members learned about conservation abroad from our own zoo staff's experiences.

We are also excited to announce our new website that we hope you'll have the opportunity to check out: <http://homepage.mac.com/barryfhphd/SDAAZK/SDAAZK.html><

And finally, the results from our last election are in:

President..... Bob Cisneros  
Vice President..... Leticia Plasencia  
Treasurer..... Nicki Boyd  
Secretary..... Bridgette Mulholland  
Fundraising Chair/Chapter Liaison  
..... Matt Akel  
BFR Coordinator..... Aimee Goldcamp  
Newsletter Publisher and Editor  
..... Yvette Kemp



## CHAPTER LOGOS

Does your Chapter have a new logo? Please keep us up-to-date if you change your Chapter logo. Also, new Chapters are encouraged to send in a copy of their logo as soon as they adopt one. Logos may also be sent as graphic file attachments (tiff or jpeg) to the email address listed below.

We will be producing another Chapter Logo Registry in 2005, so make certain the logo in our file is your most current one. When sending in logos, please include name of the artist/designer, date logo was adopted, and what, if any, significance is in the design - animals represented, etc.

**What's your AAZK Chapter been up to? Send your Chapter News to the Editor at:**  
**[akfeditor@zk.kscoxmail.com](mailto:akfeditor@zk.kscoxmail.com)**

# Developing a Comprehensive Training Program for 0.4 Inca Terns

By Catherine Vine, Bird Keeper  
The Philadelphia Zoo, Philadelphia, PA

In December of 2002, the Philadelphia Zoo Bird Department, in conjunction with consultants from Natural Encounters, Inc., began a training program with the 0.4 Inca terns (*Larosterna Inca*) in the zoo's collection. The program was designed to accomplish two major goals: address any husbandry concerns and educate the public about the natural behavior of the species. With these goals in mind, several behaviors were initially trained. As the program advanced and additional husbandry needs became apparent, new behaviors were added. To date, the terns are currently being trained to perform four husbandry behaviors and two educational behaviors.

Because the terns are housed in a large, free-flight walk-through aviary, the first husbandry behavior trained was crating on cue. As the primary keeper in the area, my most pressing concern focused on the need to have access to these four birds in an exhibit where netting them would be essentially impossible. Initially, one crate was used for two birds. The crates were lined up back to back on a marble wall that runs almost the length of the public area within the exhibit. This wall had several advantages; it provided a flat surface, placed the birds about three feet off the floor, and allowed the public to be close to the training process. While we continue to use the marble wall for the majority of the terns' training, we switched from two crates to four when aggression between the birds within the crate began to interfere with the training. Currently, four crates are lined up along the wall. All four birds recognize their individual crate. This behavior has already allowed us to crate three of the four birds for a variety of reasons, including temporary transfers to other areas, veterinary exams, and DNA sexing. Three of the terns have voluntarily crated multiple times following these stressful events, and this behavior has greatly assisted in the management of the health of the birds.

During the crate training process, it became clear that it would be necessary to obtain frequent, accurate weights on the birds in order to ensure that each bird was receiving an adequate diet. We continued using the marble wall for training. A scale was adapted with a turf surface to make it comfortable for the birds, and each bird was trained to stand on the scale. However, it quickly became confusing for the birds (and the trainer!), and often multiple birds would attempt to stand on the scale at once, or would chase other birds away from it.

In order to eliminate some of the chaos during the scale training sessions, each tern was taught to station. We chose to use differently colored stations, which consisted of old signboard from the Graphics Department wrapped in colored electrical tape. The station colors were chosen to match the color of the band on each bird to simplify the training. Each tern quickly learned where to station, and currently all four birds recognize the distinct color of their station. By using movable, colored stations, we can cue individual birds to the scale while reinforcing the others for staying still on their station. In addition, when aggression breaks out between individual birds, the stations can be moved further apart to dissipate the tension and allow the training session to continue.

Along with obtaining accurate weights and having the ability to crate these birds, an additional husbandry concern soon became apparent. The birds were sometimes observed limping, and a closer examination with the birds in-hand revealed that they were prone to developing cracks on their feet. At the suggestion of our veterinarian, we decided to train each bird to stand in an individual saltwater bath. We used small food dishes, and added turf and saltwater. All four birds quickly learned to stand in the baths in a specific order, and during future veterinary exams, the condition of the birds' feet has greatly improved.

Aside from addressing four major husbandry concerns, we wanted the training program to give us the opportunity to educate the public about the natural history of these birds. Because the public can walk right up to the wall where the training is done, they are able to observe training sessions in close proximity. They also have the opportunity to ask questions and interact with the trainer. In the wild, terns feed by diving from significant heights into the water. They are quite adept at hovering, and that behavior was quickly (and easily) put on cue to be interpreted to the public. We are also working to train the birds to dive on cue. As part of an AAZK fundraiser, we were able to obtain footprints from the terns using their existing training. We began by acclimating them to having a sheet of paper beneath their individual stations. We then rolled paint onto their stations, and as the terns stepped off onto the paper, they left footprints. While this is clearly not a natural behavior, it provides us with an additional opportunity to interact with the public, and allows them to see the footprints and ask questions about the birds.



**Inca tern "Lucy" busy making footprints**

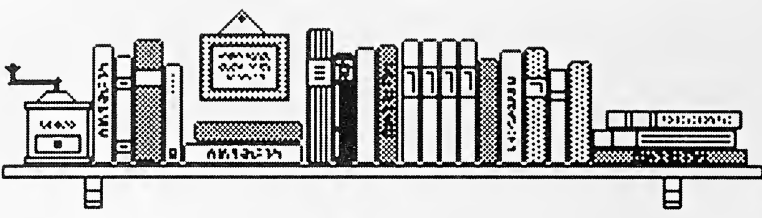
*(Photo by Amy Ivins)*

The four Inca terns have proven to be quite receptive to learning new behaviors, and we plan to add to the training program as necessary to address any future husbandry concerns and to continue to highlight these remarkable birds to our visiting public. Through the use of training, we have been able to manage these birds in a way which was previously impossible. We can monitor their health much more easily, decrease their stress level during veterinary exams and transfers, and observe small changes in behavior immediately. The training program has been quite successful so far, and we are currently working with a variety of other species as well with the goal of improving our care of the entire bird collection.

Special thanks to my co-trainers Betsy Karkowski and Kristi Blundetto; the consultants from Natural Encounters, Inc. Phung Luu, Greg Felty, and Steve Martin; the Senior Vice-President of Animal Programs, Dr. Andy Baker; Bird Curators Dr. Aliza Baltz and John Ffinch; and the Director of Nutrition Programs, Barbara Toddes.

*Addendum: Shortly after the completion of this article, but prior to publication, we unfortunately lost one of the Inca terns. Ethel, a.k.a. "The Ninja," was an amazing bird who will be missed by everyone who had the opportunity to work with her. She taught us a lot about training, and in the end, a lot about strength. We'll miss her...*

*-The Bird Department of the Philadelphia Zoo*



# Book Reviews

## **The Panther Chameleon:**

### **Color Variation, Natural History, Conservation, and Captive Management**

By Gary W. Ferguson, James B. Murphy, Jean Baptiste Ramanamanjato, & Achille P. Raselimanana  
Orig. Ed. 2004 ISBN 1-57524-194-3

Krieger Publishing Company, P.O. Box 9542, Melbourne, FL 32902-9542

166 pp. \$35.50

*Review by Tracey Anderson  
Instructor - Zookeeping Technology Program  
Pikes Peak Community College  
Colorado Springs, CO*

The introduction in this book provides very scientifically presented details regarding chameleons. It includes systematics and the taxonomic history of the panther chameleon. The introduction also details the four common Malagasy species that are allowed for export by the Madagascar government.

The section on natural history gives comparative information on interspecific competition between the Oustalet's and the panther chameleons. The information presented is primarily gathered from wild population studies and accumulated information, but some comparative information from captive populations is included. The limited combined information seems to be the best way to provide the most complete information as several areas of study covered in this book remain incomplete in their findings; such as demography.

The reproductive section gave seasonal time lines, clutch size information as well as single and multiple clutch findings. Nesting details were compiled from semi-natural and captive conditions.

There was limited information on the nutritional requirements and nutritional based studies. Vitamins A and D were basically the only topics with the conclusion being that other nutritional requirements were poorly understood.

Collecting and exportation regulations were generalized and there was a lack of definitive figures for the effects on populations as a result. A summary on ranching and farming speculates of feasibility and probability of successful programs.

The history of captive chameleon husbandry was thorough and interesting to read. The husbandry section, while including some chameleon husbandry generalizations, was indeed thorough and specific for the panther chameleon captive requirements. This included health, reproduction and some artificial incubation information.

Approximately the last 1/4 of this book is dedicated entirely to literature cited and appendices reiterating the limit of concluded information on the panther chameleon. While seemingly providing the best (limited) information that is currently available, it is presented in a very scientific manner and is not suitable for the beginning chameleon hobbyist.

## **Life at the Zoo, Behind the Scenes With the Animal Doctors**

By Phillip T. Robinson

Columbia University Press, 61 W. 62nd St, NY, NY 10023, copyright 2004,

ISBN 0-231-13248-4

293 pages, \$27.95

*Review by Leslie Keys, Principal Keeper, Bird Section  
Detroit Zoological Institute, Royal Oak, MI*

For any veteran zookeeper, reading *Life at the Zoo* will bring back a flood of memories, mostly

good ones, about the realities of working in a zoo. Dr. Robinson, a veterinarian and director of the veterinary medical program at the San Diego Zoo for 10 years clearly captures the essence of zoo life, zoo politics, and the troublesome balancing act of taking appropriate care of the animals while keeping the public reasonably content. He begins his book reminiscing about his first days as a veterinarian at the San Diego Zoo, and then expands into a brief history of the San Diego Zoo, including descriptions of early exhibits, veterinary facilities and the physical surroundings.

Most of his chapters are liberally laced with historical data compared to current trends with musings about what the future holds in any given area. This makes for very interesting reading because the veteran zookeeper can actually remember a great deal of "how things used to be", the novice zookeeper can look about and see how far zoos have come, and both can see the possibilities raised for the future. Robinson takes his readers on a tour of the zoo veterinary world and touches on most subjects related to that; housing, breeding, treating, moving, feeding, etc.

Because this book appears to be written for the general public by a vet, the chapter describing zookeepers left me somewhat dissatisfied. Although he gives lavish praise to zookeepers as a group, extolling us as the eyes and ears of the veterinary staff, this section is filled mostly with the mistakes or difficulties of working with keeper staff. Although I wish he had expounded more on our virtues, dedication and innovativeness, I suppose he could be forgiven. He mentions several pretty funny excerpts from keeper reports and describes a couple of keeper characters in a sympathetic way.

There is a particularly amusing chapter on certain zoo guests that all zookeepers can relate to. Every zoo has regular characters that are known to the whole staff and are laughed about around the lunch table. San Diego is no exception and keepers can relate to this and add a number of their own experiences.

At the end of the book are two chapters discussing ethics and the mission of zoos. We are presented with several thought-provoking issues and Robinson gives us his philosophy. No keepers, after reading this book, could put it down and walk away without reexamining their own ethics and philosophy. That is what sets this book apart from mere entertainment. In the end, it makes us think.

### **Life at the Zoo: Behind the Scenes with the Animal Doctors**

By Phillip T. Robinson 2004

*Review by Nannette Driver, Primate Keeper  
Chaffee Zoo, Fresno, Ca.*

People not involved in the zoo field will probably enjoy this behind the scenes look into what happens at the zoo. It is also a good addition to any zookeeper's personal collection if you enjoy reading zoo related books. However, it did not capture my attention from the very start of the book. Although there was humor and emotion throughout all the chapters, it was still a rather dry read and the title seemed misleading, as there was very little relating to the veterinary aspect of the zoo.

The book begins with the author reflecting on the start of his veterinary career. He then provides historical facts on the first zoo vets. Although this history was interesting to learn, this is where my interest in the book started to wane. By chapter four, he moves into what it is like to be a zookeeper and leaves the veterinary stories behind. There are also chapters on the evolution of exhibit design and enrichment. It is not until the tenth chapter that Robinson returns to the veterinary aspect of the zoo field. But, by the fifteenth chapter, the vet stories are over again and we return to ethically kept animals, and what a zoo should or should not be. The best chapter in the book is chapter fifteen. It is called "zoo regulars." It has humorous insights into the "regular visitors" that every zoo has, the ones that only come on rainy days, or just to talk to the tortoises, etc.

I would recommend *Life at the Zoo* to anyone who has a lot of zoo books and wants to expand their collection. But, if you are looking for a really great or informative story about zoo vets, I am sure there are other books out there that might fill your needs a little more closely.

# ALBA'S HOME IMPROVEMENT

*By Laszlo Szilagyi, Animal Keeper  
Lincoln Park Zoo's  
Farm-in-the-Zoo Presented by John Deere  
Chicago, IL*

When I first met Alba in 1987, Lincoln Park Zoo's eldest barn owl (*Tyto alba*) was active as an educational program animal. But in her "off-hours" the 10-month old was housed at the McCormick Bird House in a stainless steel cage 3'W x 4'L x 3'H (.9m x 1.2m x .9m). Obviously Alba deserved better housing.

Limited indoor space restricted the size of the bird's enclosure. So when an outdoor Bird of Prey exhibit was built in 2002, Alba was able to spread her wings.

She had spent much of her life indoors, including a period in late summer 2002 when she was housed indoors due to West Nile virus concerns. As the temperature dropped that first year staff had concerns about Alba's ability to remain outside. While her new home is partially covered to block precipitation and includes a clear tarp which serves as a see-through windbreak, it still gets cold.

Staff decided to keep Alba indoors for another winter.

As temperature rose in spring 2003 Alba returned to her much-favored outdoor holding. At the same time, keepers and managers discussed plans to enable our beloved owl a permanent outdoor life. We decided that she would need a specially designed box to withstand harsh weather, and that this "apartment" must be introduced early enough for her to acclimate to it before the cold winds arrived.

The owl box we designed has two rooms. The first is a nest area with a hinged front, which enables keepers to tend to the bird and clean the walls and floor. A perch leads towards a 5" (12.7cm) diameter hole that offers Alba access to the second room, her "porch." The porch has no bottom or front, and one of its sides is Plexiglas®, which offers light and visibility while serving as a windbreak.

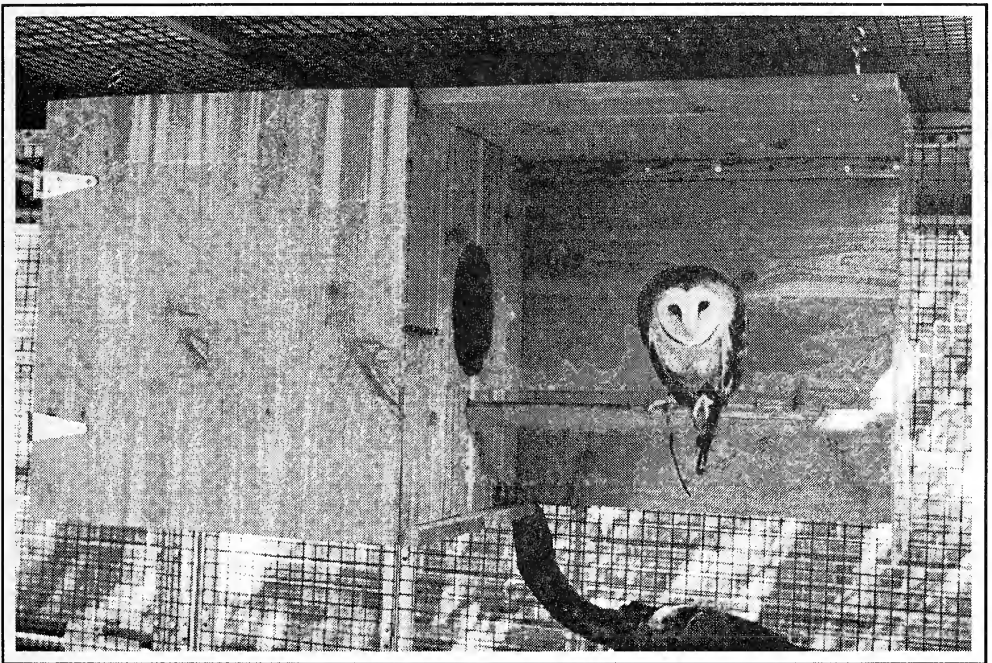
The owl box is made primarily of cedar to appear natural and withstand outdoor conditions. The perch is wrapped with one half-inch (1.27cm) clothesline to prevent the bird from getting bumble foot. The dimensions of the box are 24"H x 48"W X 24"D (.6m x 1.2m x .6m) . Half the width (24"/.6m) is the nest box and half (24"/.6m) is the porch. (See photo.) Total cost was \$100.00.

I completed the owl box and presented it to Alba in August 2003. At first it appeared that she wouldn't go near it. Skeptics of this project had their chance to voice their feelings. But the bird eventually proved them wrong by climbing onto the perch despite other perching options within her exhibit. A few days later she was spotted in the nest box, which has become her favorite spot to rest.

Winter 2003-2004 was Alba's first outside. As temperatures dipped into single digits a heat plate was installed inside the nest box and a ceramic heater was placed near the porch. Her diet was also adjusted to meet her increased energy needs as a result of thermoregulation. Her weight was closely monitored throughout the season.

Alba seems to enjoy her box immensely. During most of the day she takes refuge inside and ventures out at night, when keepers report that her threatened-vocalizations have decreased. She has even laid an egg in her nest box, a first for her, and has exhibited territorial protective behavior.

As of spring 2004 Alba has shown no adverse affects from her rugged winter. Since becoming a "homeowner" her behavior has more closely resembled that of a confident barn owl. She is still an active participant in our educational programs, and this experience has educated Lincoln Park Zoo staff.



### **Alba at Home**

*(Photo by Laszlo Szilagyi)*

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#### **Publications Notice from ZooLex**

We would like to thank Gustavo Collados, landscape architect and zoo designer for making his thesis available. It is an excellent introduction to zoo design in Spanish. You can download the document from here: <http://www.zoolex.org/research.html>

Jeff Shimonski, Director of Horticulture at Parrot Jungle in Miami, FL, describes how the actual landscaping was developed on the island where Parrot Jungle moved to in 2003. He also describes the composting routine at Parrot Jungle and techniques of integrated pest management which he has successfully applied for years at this facility: <http://tropicaldesigns.com/pji-first.htm>

## Concern for Animals, Human and Nonhuman

By Brett Bannor, Keeper  
Zoo Atlanta, Atlanta, GA

In *The Strange Career of Jim Crow*, historian C. Vann Woodward chronicled the history of American segregation. Woodward at one point mentioned my institution, Zoo Atlanta, or as it was then known, the Atlanta Zoo.

An Atlanta ordinance of June 1940 made the single exception of its park segregation 'so much of Grant park as is occupied by the zoo.' Only in the presence of the lower anthropoids could law-abiding Atlantans of different races consort together. (Woodward, 2002:117)

And once the people of Atlanta, black and white alike, stood in the presence of "lower" anthropoids and other animals in their community's zoo as it was in 1940, what did they see? They viewed animals in small, sterile, concrete and iron cages (Desiderio, 2000). These enclosures were not sensitive to the needs of the animals, nor did they give visitors an appreciation for the magnificence of the lions, tigers, or gorillas inhabiting the cramped quarters.

Today Zoo Atlanta's gorillas occupy four large, naturalistic habitats where they can behave and interact in a manner not possible in old-fashioned cages. And people of every race, religion, or ethnicity are welcome to visit and admire these fascinating great apes.

I have a keen interest in the law as it relates to animals in captivity. Recently it occurred to me that temporally speaking, the growth of concern for the well-being of animals in captivity closely paralleled the development of the civil rights movement. Is this just coincidence? Or is there certain inevitability to the notion that a society concerned with equal treatment for the races would not accept callously designed zoo enclosures, and vice versa?

Civil rights progress was in many respects a matter of law. The milestones of the movement were such societal changing events as *Brown v. Board of Education* and the other 1954 school segregation cases, in which the United States Supreme Court set a bold new course for the land, and the Congressional passage in 1964 of a powerful and compassionate civil rights law.

Another such milestone occurred in 1963 when Reverend Martin Luther King, Jr. went to jail in Birmingham, Alabama, because he broke a law he considered unjust (King, 1986: xxvii). The birthplace of America's great civil rights leader is scarcely a mile and a half from Zoo Atlanta. When the 1940 Grant Park segregation law was passed, King, then 11 years old, attended school nearby and on Sundays listened to his father preach at the Ebenezer Baptist Church (King, 1986: xxiii).

In 1959, Dr. King visited India to study the techniques of nonviolent resistance in the homeland of the leading figure of this philosophy, Mohandas Gandhi. King wrote an article in 1959 describing his Indian foray. Interestingly in light of our concern here, King began his piece with a homily to India's wildlife:

For a long time I had wanted to take a trip to India. Even as a child the entire Orient held a strange fascination for me—the elephants, the tigers, the temples, the snake charmers and all the other storybook characters. (King, 1986:84)

Of course, King's primary zoological interest was in his own species, and most of the article is a charming description of the reception he encountered in India. He mentions that he spoke with



many people in India who were well informed on the Montgomery bus boycott. Thanks to Dr. King and others like him, no one visiting Atlanta or any part of the United States need ever worry that he cannot sit on the bus here, nor use that water fountain there, because he is of the “wrong” race.

That goes especially for the children. When my day’s duties at Zoo Atlanta include watching over the petting zoo, sometimes I’ll see children of every racial or ethnic background imaginable all mingling about, gently stroking or brushing the goats and sheep. Once in a while as I’m so engaged, the horrifying thought occurs to me that at one time in Atlanta the notion of youngsters of different races in the same school classroom, the same park, the same petting zoo simultaneously would have been impossible. It was, in fact, in many contexts illegal to mingle races, especially among children. Not only were most public southern schools segregated as a matter of law, but Florida and North Carolina even enacted legislation mandating that textbooks used by schoolchildren of one race be kept separate from those used by the other (Woodward, 2002:102).

Dr. King’s birthplace is not the only site of historical civil rights significance close to Zoo Atlanta. Also less than two miles from the dominions of our exotic animals stands the downtown site of the Heart of Atlanta Motel, now occupied by the Hilton (Cortner, 2001:182). When the 1964 Civil Rights Act was passed by Congress, owners of the motel challenged the legislation, believing it was their right to refuse to provide accommodations to African-Americans if they so chose. The case went all the way to the U.S. Supreme Court, which in *Heart of Atlanta Motel v. United States* unanimously rejected the motel’s claim and upheld the Civil Rights Act. “Whites only” signs were illegal; segregated motels or restaurants would never more be tolerated (Cortner, 2001).

Before *Heart of Atlanta*, “Whites only” signs were also sometimes seen in front of zoos, which in the South were often racially segregated. Notably, the opinions filed in two cases that reached the U. S. Supreme Court, *Watson v. Memphis* in 1963 and *Palmer v. Thompson* in 1971, mentioned in passing that the cities of Memphis, Tennessee, and Jackson, Mississippi, respectively, had formerly practiced segregation at their zoos.

The “separate but equal” doctrine as applied to zoos did not mean, of course, that any southern city maintained two zoos, one for whites and another “equal” one for blacks. Rather, the situation that existed is demonstrated quite dramatically—and unexpectedly—by a photograph displayed in the visitors’ center of Atlanta’s Martin Luther King National Historic Site. The image shows the entrance to the Memphis Zoo during the days of Jim Crow. A posted sign reads “No White People Allowed in Zoo Today.” The graphic accompanying the photograph reads: “Segregation was intended to send a strong, lifelong psychological message: black people were inferior to whites and should be kept segregated. If such an attitude could be maintained it would then be easier to keep blacks economically subjugated.” Obviously, to the animals residing at the Memphis Zoo the race of their visitors on any particular day did not matter. Lions do not roar only for Caucasians.

“No white people allowed in zoo today.” This blunt and chilling message demonstrates an element of segregation all too easy to forget. It was not simply a matter of the activities of black people being tightly regulated. White people in the South were similarly forced to observe a code of social conduct. Imagine a white family on the day the photograph was taken driving to the Memphis Zoo, unaware that it was the “black” day and not being able to enter the park to see their favorite animals.

Journalist Carl Rowan addressed the effects of segregation on white people in his biography of Thurgood Marshall, *Dream Makers, Dream Breakers*. In a poignant passage, Rowan describes visiting a friend in Little Rock, Arkansas in the late 1950s:

My most touching moment... came when (Arkansas) Gazette publisher Hugh Patterson said to me: “You know, you are my friend, my colleague on the National Citizens Council for Better Schools. You are a journalistic peer whom I respect beyond all bounds. I should be taking you to lunch today at one of the private clubs to which I belong. But they tell me that I am not allowed to bring you or any other Negro to lunch at my clubs. When they told me that it became clear to me that the segregationists have not simply deprived you of freedom, they have stripped my liberty away from me. I don’t know why it took me so long to understand that millions of white people are terrible victims of white bigotry.” (Rowan, 1993:248-49) Fortunately, by the late 1950s, events had been set in motion that would in a relatively short time change America forever. These changes would involve education, recreation, and especially voting, perhaps the most fundamental aspect of liberty. As Alexander Keyssar put it in *The Right to Vote*, “A poor black woman in Alabama who could not

set foot in a polling place in 1958 could pull a voting-machine lever for a black candidate in 1972.”(Keyssar 2000:256-57)

It is interesting to examine Keyssar’s 14-year period encompassing 1958 through 1972 in light of the temporal relationship between the struggle for civil rights and the growth of concern for the treatment of animals. We should note in this regard that the most significant federal legislation mandating standards for husbandry of captive animals, the Animal Welfare Act, was passed in 1966, which means it was debated and enacted by many of the same members of Congress responsible for passage of the Civil Rights Act two years earlier.

The Animal Welfare Act was certainly not an anomaly to its time. A number of conservation measures that testify to growing concern for wild animals as well as captive ones were taken by the federal government in the 1960s and early 1970s. These actions include the Wetlands Loan Act (1961), the Land and Water Conservation Fund Act (1964), the Wilderness Act (1964), the Anadromous Fish Act (protecting salmon, 1965), the National Environmental Policy Act (1969), the Wild Free-Roaming Horses and Burros Act (1971), the Marine Mammal Protection Act (1972), and of course, the Endangered Species Act (1973). (Texts of all these statutes are reprinted in Goble and Freyfogle, 2002). There can be little doubt that coming as they did in the span of little more than a decade, these laws were a reflection of ever-increasing public concern over wildlife. Once again, this was similar to the concurrent expansion of civil rights legislation.

*Compassion and concern* are key words for understanding the simultaneous interest in animal welfare and civil rights. These are qualities that humans, at their best, display with an impressive verve. I mention this because having worked so extensively with animals; I know how easy it is sometimes to feel that man is a perversely hideous member of the animal kingdom. Usually we arrive at this conclusion by stressing all the horrors in the history of humanity, perhaps believing that other creatures are fortunate to not know the depths of our evil or our pain. We often hear in our hearts the words of Walt Whitman, who in stanza 32 of *Song of Myself* wrote:

I think I could turn and live with animals, they are so placid and self-contain’d,  
I stand and look at them long and long,  
They do not sweat and whine about their condition,  
They do not lie awake in the dark and weep for their sins,  
They do not make me sick discussing their duty to God,  
Not one is dissatisfied, not one is demented with the mania of owning things,  
Not one kneels to another, nor to his kind that lived thousands of years ago,  
Not one is respectable or unhappy over the whole earth.

(Untermeyer 1969: 56-57)

Before we become too enveloped with self-loathing of our own species, we should remember our magnificent human capacity for compassion and concern. Our ability to kill each other and our mania about doing it is, in truth, of note because of how often we *don’t* act in such a manner. Genocide is not as common as kindness.

In south Florida lies the range of the endangered Florida panther. Studies have shown that when two male panthers encounter each other, the result is usually serious injury or death to one of the cats (Maehrer, 1997: 98). I lived for 14 years in Miami, just east of the panthers’ range. During those 14 years I encountered thousands of other human males; not one of these interactions resulted in serious injury or death. We easily forget the benefits of membership in the human race.

And so, to answer the legal and social questions I brought up, I think there is certain inevitability that a society which values people of all races, religions, and ethnicities is a good candidate to also value animals. Such a society will express this compassion and concern through the law.

When I was a child, the first zoo I ever visited was Lincoln Park Zoo in my boyhood home of Chicago. Inside the old Monkey House stood a sign that read “You are now looking at the most dangerous animal in the world.” Beside the graphic, of course, was a mirror.

No doubt in many ways that sign was correct; humans can commit sickening atrocities. But on the other hand, look at all the wonderful things we can do that other animals can’t. Only humans

become doctors, striving to cure illness. Only humans become schoolteachers, accepting low pay for a chance to influence young minds that hopefully will try to make a better world. Only humans expend great time and effort to engage in charitable work to benefit the less fortunate. Only humans like Martin Luther King can echo words as meaningful as "I have a dream."

Perhaps in fairness, there should have been a second sign in the Monkey House. It too would be beside a mirror. This caption, however, would read: "You are now looking at the most compassionate animal in the world."

*This article is the opinion of the author and does not necessarily represent the position of the Atlanta Fulton County Zoo, Inc.*

## **Appendix**

Listed below are the legal citations for the cases cited in the article, in the order in which they were mentioned:

Brown v. Board of Education 347 U.S. 483 (1954).

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*(Editor's note: The Viewpoint Column offers readers an opportunity to their express opinions on topics related to the profession of animal keeping. It is not a forum for expressing disagreements with employers about labor-related issues. Opinions expressed in this column do not necessarily reflect those of AAZK, Inc. or Animal Keepers' Forum. Publication of opinions in this column does not constitute endorsement by AAZK, Inc. or Animal Keepers' Forum. Materials submitted are published at the discretion of the editor.)*

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# Legislative/Conservation Update

Compiled by Georgann Johnston  
Legislative Advisor  
Sacramento, CA



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## USFWS Agreement Continues Bowhunting

The U.S. Fish and Wildlife Service (USFWS) recently signed a four-year agreement with the Archery Trade Association, the Bowhunting Preservation Alliance, and Arrowsport to increase archery and bowhunting opportunities, predicated on bowhunters' continued support for wildlife conservation. "This is another example where the U.S. Fish and Wildlife Service is strengthening partnerships with the hunting community," Service Director Steve Williams said. "These groups are on the forefront of wildlife conservation in the nation. Since 1985, excise taxes paid on bows and arrows have contributed more than \$320 million to state conservation programs."

The USFWS administers the Wildlife Restoration Program by distributing excise taxes collected on hunting equipment to each state wildlife agency for a variety of approved projects. These projects include the construction of archery ranges, bowhunter education and training, archery education in schools, mentoring programs and urban, youth and special hunts. The money to fund the program is generated, in part, by excise taxes on bows and arrows paid by the archery and bowhunting industry. The Wildlife Restoration Program allocated nearly \$204 million to State fish and wildlife agencies in fiscal year 2004. *Source: USFWS Press Release 29 September 2004*

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## Interior Department Announces More Than \$70 Million in Grants to Support Land Acquisition and Conservation Planning for Endangered Species

In September, Interior Secretary Gale Norton announced more than \$70 million in grants to 28 states and one territory to support conservation planning and acquisition of vital habitat for threatened and endangered fish, wildlife and plant species. The grants will benefit species ranging from the Delmarva fox squirrel (*Sciurus niger cinereus*) in the East to peninsular bighorn sheep (*Ovis canadensis cremnobates*) in the West.

Funded through the Cooperative Endangered Species Conservation Fund and authorized by Section 6 of the Endangered Species Act, the grants will enable states to work with private landowners, conservation groups and other agencies to initiate conservation planning efforts and acquire and protect habitat to support the conservation of threatened and endangered species. The Cooperative Endangered Species Fund this year provides \$49 million through the Habitat Conservation Plan Land Acquisition Grants Program, \$8.6 million through the Habitat Conservation Planning Assistance Grants Program and \$13.5 million through the Recovery Land Acquisition Grants Program. The three programs were established to help reduce potential conflicts between the conservation of threatened and endangered species and land development and use.

A Habitat Conservation Plan is an agreement between a landowner and the Service that allows the landowner to incidentally take a threatened or endangered species in the course of otherwise lawful activities when the landowner agrees to conservation measures to minimize and mitigate the impact of the taking. A Habitat Conservation Plan may also be developed by a county or state to cover certain activities of all landowners within their jurisdiction and may address multiple species. There are more than 357 Habitat Conservation Plans currently in effect, covering 458 separate species on approximately 39 million acres, with some 407 additional plans under development, covering approximately 100 million acres. The Habitat Conservation Planning Assistance Program provides grants to states and territories to support the development of Habitat Conservation Plans, through funding of baseline surveys and inventories, document preparation, outreach and similar planning activities. The Recovery Land Acquisition Grants Program provides funds to states and territories to acquire habitat for endangered and threatened species in approved recovery plans. Acquisition of habitat to secure long-term protection is often an essential element of a comprehensive recovery effort for a listed species. *Source: USFWS Press Release 23 September 2004*

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## **COP13 Panel Presents Conclusions About Threats of Wildlife Criminals**

Representatives of an international group of law enforcement experts attending the ongoing meeting of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) presented their conclusions about the threats posed by wildlife criminals to the survival of numerous plants and animals. The presentation was part of the program at the Thirteenth Convention of the Parties in Bangkok, Thailand in early October.

The panel, consisting of 20 officials from national CITES Management Authorities, the CITES Tiger Enforcement Task Force, customs authorities, fishery protection authorities, intelligence agencies, the Interpol Wildlife Crime Working Group, the Lusaka Agreement Task Force police and prosecution and wildlife authorities from around the world, was tasked by CITES in 2002 to study how effectively the Convention is being enforced and to make recommendations for improvements.

The group's results includes the following findings: The illicit trafficking of wildlife continues at high levels and increasingly involves organized criminal networks, sophisticated poaching and smuggling techniques, fraudulent trade permits, corruption and violence towards enforcement officers; in many countries the authorities lack the necessary resources and experience to meet the challenge; and there is not enough coordination and information sharing amongst various enforcement authorities.

In addition, the experts are calling for: A recognition by governments of the seriousness of wildlife crime and a commitment by law enforcement authorities to give it a higher priority; increases in the status, authority, training and quality of equipment of wildlife law enforcement personnel; greater international and regional cooperation and better coordination of investigations; more use of and easier access to forensic science; more use of CITES enforcement task forces; and increased support to the wildlife enforcement work of the CITES Secretariat, Interpol and the World Customs Organization.

"We are in danger of losing the war against wildlife crime, especially for some very rare animals and plants, unless modern professional law enforcement techniques are directed against criminals who care for nothing but profit, who exploit some of the world's poorest communities and take advantage of periods of civil unrest and instability," said CITES Secretary-General Willem Wijnstekers.

"The illegal trade in wildlife remains the second greatest threat to the world's endangered species after habitat destruction. Many wildlife smugglers deal in products that are worth more, per kilo, than cocaine or heroin. Shawls made from the fine wool of the Tibetan antelope, for example, can cost over \$15,000 (U.S.) each. The caviar trade is infested with organized crime networks. Senior enforcement officials seldom attend CITES meetings, and wildlife crime is rarely discussed at international conferences on crime. This must change," said Mr. Wijnstekers. *Source: CITES Press Release 7 October 2004*

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## **United States Reauthorizes North American Waterfowl Management Plan**

Interior Secretary Gale Norton reaffirmed the United States' commitment to international waterfowl conservation efforts by signing an update to the North American Waterfowl Management Plan. The plan is a public-private approach to manage waterfowl in Canada, Mexico and the United States. Partners have invested more than \$2.2 billion to protect, restore or enhance more than eight million acres of habitat in the plan's history.

With final approval from the Canadian and Mexican environmental ministries, the 2004 North American Waterfowl Management Plan — Strengthening the Biological Foundations will guide the three countries in waterfowl conservation. The plan calls on the partners to manage sustainable landscapes, consult and cooperate with partners and use strong biological foundations to make decisions.

Partners' conservation projects not only advance waterfowl conservation but also make substantial contributions toward the conservation of all wetland-associated species. The plan is international in

scope, projects to advance the plan goals take place at regional and local level. Success is dependent upon the strength of Joint Ventures, which involve federal, state, provincial, tribal, and local governments; businesses; conservation organizations; and individual citizens. Presently, there are 11 habitat Joint Ventures in the United States and three in Canada. Three additional Joint Ventures have been formed to address monitoring and research needs for black ducks, sea ducks and arctic geese.

The original plan established an international committee from each of the three countries. The committee provides a forum for discussion of major, long-term international waterfowl issues and makes recommendations to directors of the three countries' national wildlife agencies. The U.S. delegation to the plan committee consists of two USFWS representatives and one state representative from each of the four flyway councils. Canada's six delegates represent the federal and provincial governments. In Mexico, delegates represent the federal government, universities and nonprofit conservation organizations. The three federal wildlife resource agencies each have a permanent seat. The remaining seats have a three-year rotation. The specific goals of the plan are to establish continental waterfowl conservation objectives and priorities; to increase stakeholder confidence in the direction of waterfowl conservation; and to guide partners in strengthening the biological foundation of North American waterfowl conservation. *Source: USFWS Press Release 6 October 2004*

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### **Global Ban on Black Rhino Hunting Eased**

A global ban on hunting rare black rhinos (*Diceros bicornis*) was on its way to being partially lifted at last month's COP13 meeting in Thailand. A committee of the Convention delegates adopted a Namibian proposal that will allow the southern African country an annual quota of five black rhinos for trophy hunters. A proposal by neighboring South Africa to allow five of the animals to be hunted each year was also passed at the two-week conference. South Africa had asked for a quota of 10 black rhino, but reduced it to five at the start of the meeting to address the concerns of conservationists.

"We appreciate this recognition of our conservation achievements," said Malan Lindeque, the top civil servant at Namibia's Environment Ministry. Africa's black rhino has been snatched from the brink of extinction and its numbers are on the rebound, but it still faces many threats, conservationists say.

"We know rhinos are still being poached for their horns and the poachers are indiscriminate, so we think this proposal sends out the wrong signal," said Jason Bell-Leask, director of the southern African branch of the International Fund for Animal Welfare.

Today it is estimated that there are about 3,600 of the black rhinos and Namibia and South Africa say only old males who are no longer breeding would be targeted, so the impact on the populations would be negligible. The cash raised will also be ploughed into conservation programs. Black rhinos are expected to fetch tens of thousands of dollars apiece. *Source: Reuters Newswire 4 October 2004*

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### **COP13 Raises Leopard Quotas**

Annual hunting quotas for leopards in Namibia and South Africa were also raised by COP13 delegates in October 2004. South Africa's quota was raised to 150 from 75 and Namibia's to 250 from 100. Leopards are one of Africa's so-called "Big 5 game animals", which includes lions, rhinos, buffalo and elephants.

The move has brought protests from a number of conservation groups. "I think a lot of organizations do focus their campaigns on the big animals," said Claire Wallerstein, a spokesperson for the International Fund for Animal Welfare. "By focusing on a few large animals which people relate to easily we hope to raise environmental awareness of the increasing threats to the natural world in general." *Source: Reuters Newswire 4 October 2004*

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### **New Speed Zones Created for Manatees in Florida**

The Florida Fish and Wildlife Commission created new manatee speed zones around the Tampa Bay area in Pinellas, Hillsborough and Manatee Counties, reports the *St. Petersburg Times*. Since 1974, more than 250 manatees have turned up dead in Tampa Bay, with more than 60 of those deaths caused by boats. Tampa Bay's manatees are part of the Southwest Florida regional population group, which scientists think is in worse shape than the ones in the rest of the state. Some local residents objected to the speed zones to protect manatees from potentially deadly collisions with

boats. "My rights as a citizen, a fisherman and a boater come first," local resident Dan Lavalley told wildlife commissioners. "We're not here to protect the rights of insects, birds and animals."

Elsewhere in Florida, the *Miami Herald* has reported that the Park Service has temporarily closed a 1,900-acre section of Big Cypress National Preserve to protect the endangered Florida panther. Female panthers that are ready to give birth seek defense and secluded cover, often in saw palmetto that hasn't burned for many years. The mothers may stand their ground against intruders, including bears, bobcats, other panthers or humans. A den has recently been found in the open tree island habitat of southeastern Big Cypress. A male kitten was found at that den in late September. Sources: *GREENlines Issues #2198 9-23-04 and #2212 10-14-04.*

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### **Settlement Reached on Prairie Dog Poisoning**

Eight environmental groups and the federal government reached a settlement over the government's plan to poison prairie dogs (*Cynomys ludovicianus*) in South Dakota near Badlands National Park, reports the *Rocky Mountain News* and the *Associated Press*. The agreement will reduce the amount of acreage that will be poisoned from 8,000 acres to 5,000 acres. The excluded acreage includes most of the land inhabited by the endangered black-footed ferret (*Mustella nigripes*). The buffer-zone between public and private lands will be reduced from 1 mile to 1/2 mile. Landowners can also request that buffer be reduced to 1/4 mile with a fence that will allow grass to grow longer to discourage prairie-dog expansion. In the future, the government agreed to also consider nonlethal methods of controlling prairie dogs, such as tall grass and to study the impact of poisoning before moving ahead with another round.

More than half of the about 400 endangered black-footed ferrets living in the wild in the United States live in Conata Basin on the grassland. Government officials say they will trap and remove the dozen or so ferrets in the area that is targeted for poisoning. The state-federal plan was a response to area ranchers who say the proliferation of prairie dogs in the past few years has ruined the federal grasslands they lease for grazing. They say prairie dogs are encroaching from the federal lands onto their private rangeland, damaging it as well.

The conservation groups said the state-federal prairie dog control plan, announced by South Dakota Gov. Mike Rounds on Aug. 13, would have violated federal environmental laws, including the National Environmental Policy Act and the National Forest Management Act. Jonathan Proctor of the Predator Conservation Alliance, one of the groups involved in the suit, repeated his concern that Conata Basin is the only public land area in the Great Plains with prairie dog colonies big enough to sustain a viable ferret population. Prairie dogs make up about 90% of the endangered black-footed ferrets' diet. The eight groups which filed the suit are Predator Conservation Alliance, Biodiversity Conservation Alliance, Center for Biological Diversity, Center for Native Ecosystems, Forest Guardians, Great Plains Restoration Council, the Humane Society of the United States and Prairie Hills Audubon Society. Source: *GREENlines Issues #2198 9-23-04; #2206 10-05-04; and #2207 10-07-04*

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### **Tiger Numbers Up in Banladesh Mangrove Swamps**

*Reuters New Service* has reported that the Bangladeshi Environment and Forests Minister has announced that tiger populations have increased by 57 to 419 during the last decade in the mangrove swamps in the Sundarbans region of southwest Bangladesh. Forest officials said greater surveillance against poachers and reduced human interference with wildlife had helped the tiger population to recover. Authorities redoubled protection efforts in the mangroves after the United Nations Educational, Scientific and Cultural Organization declared the area a World Heritage site in 1997. Source: *GREENlines Issue #2211 10-13-04*

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### **Yellowstone Grizzlies May Be Delisted**

As early as next year, the federal government is planning to propose "that grizzlies in the Yellowstone ecosystem be removed from endangered species protections in place since 1975," according to the *Billings Gazette*. Once on the brink of extinction, grizzly bears (*Ursus arctos*) in the Lower 48 "number about 1,000, the vast majority of them in northwestern Montana and in and around Yellowstone National Park." The grizzly bear was listed as a threatened species under the Endangered Species Act in 1975. Although recovering in Yellowstone, grizzly bear populations in other areas such as the Cabinet/Yaak, the Selkirk Mountains and the Bitterroots, are still threatened. Some conservationists "worry that the grizzly population around Yellowstone isn't ready to lose federal protection." Louisa Willcox of the Natural Resources Defense Council says the "move to delist is premature because there aren't enough measures to protect habitat and development pressures



continue to mount.” “The window of opportunity is closing fast on our remaining grizzlies,” she said. “If we fail to seize the moment, and lost the grizzly in the Lower 48 states, will future generations forgive us?” *Source: GREENlines Issue #2195 9-20-04*

### Oceans Commission Sends Its Report to President Bush

The U.S. Commission on Ocean Policy has sent its final report to President Bush according to the *Associated Press*. “The oceans are saying, ‘We’ve had it, human beings. Give us a break,’ the 16-member commission’s chairman, retired Navy admiral and former Energy Secretary James Watkins said. “We need to treat it today or in 2010 we aren’t going to be able to recover.” The commission made 212 recommendations in its 610-page final report, the first federal review of ocean policy in 35 years. By law, President Bush now has 90 days to respond to the recommendations. Among the species threatened with extinction in the oceans, which could be helped by the implementation of the recommendations, are the White abalone (*Haliotis sorenseni*), Johnson’s seagrass (*Halophila johnsonii*), Speckled hind-a fish (*Epinephelus drummondhayi*) that can reach up to four feet in length and weigh 65 pounds, and the world’s smallest porpoise- the Vaquita (*Phocoena sinus*). *Source: GREENlines Issue #2196 9-21-04*

*Editor’s Note: GREENlines Issues are a daily news digest from the Endangered Species Coalition about imperiled species and the people working to stop extinction. For more on what you can do visit - <http://www.stopextinction.org><*

## Zoo Keeper Kenya Safari 2005

This is the African Safari you have been waiting to take! You’ll spend 10 days right in the middle of the Lewa Wildlife Conservancy. The luxury tented camp looks over a ridge where you wake to watch elephants and giraffe browsing while you have your morning coffee: The game drives let you come within feet of hundreds of species of wildlife including black rhino in their native habitat! And the food is outstanding!



Well don't just sit there. Let's go!! Because of your support of Lewa Wildlife Conservancy through Bowling For Rhinos AAZK members have earned special discounts at Lewa Safari Camp (almost 50%! ). These trips are run with the Zoo Keeper in mind so the wildlife viewing is more in depth. And the best part is that the proceeds go directly into conservation. Here are the details of the trip.

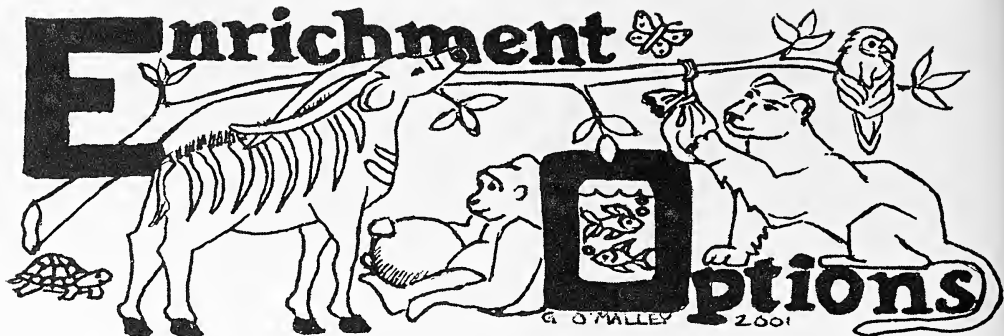
Dates: May 29 to June 8, 2005 (plus travel time)

Cost: approx. \$3,500 US (includes round trip airfare, accommodations, food, drinks, driver and Land Rover) plus tips (approx. \$50 per person)

Extras (all at reasonable prices): Side trips to other Kenyan parks (Samburu, Meru, Jane Goodall's Sweetwaters, etc.), overnights at award winning Masai lodges, horse or camel back wildlife rides, shopping at local market, etc.



We will only be taking 12 people to make sure everyone has a great time. These trips are becoming very popular so book early. For more info or to reserve your space call Kevin Shelton at 813-968-3764 . The best part is that I coordinate the details so all you have to do is get on the plane and enjoy!



*EO Editors - Dawn Neptune, Utah's Hogle Zoo  
and Rachel Cantrell, Disney's Animal Kingdom*

## **Environmental Enrichment Award Recipients**

At the AAZK National Conference this year, two Environmental Enrichment Awards were given out. One was awarded to Alicia Shelley from the Columbus Zoo, and the other went to a group of keepers from the Lindsay Wildlife Museum in Walnut Creek, CA. We here at the Enrichment Options Column would like to congratulate both winners! In this month's and next month's columns, we will be highlighting the work of both.

Alicia Shelley is a keeper in the North American Region of the Columbus Zoo. She is currently the Chair for their Environmental Enrichment Committee. She has spent many years developing this committee in order for it to be effective zoo-wide. She has implemented programs that involve the keeper staff as well as zoo visitors. She has been an integral player in developing a sustainable enrichment program that benefits the animals as well as the keepers and visitors. Besides being involved locally at her zoo, she is also a member of the national AAZK Enrichment Committee where she helps develop and facilitate enrichment-related workshops.

Alicia is responsible for developing several projects that impact all of the animals at the Columbus Zoo. She developed and coordinated several enrichment days. For each enrichment day she ensures that every animal area participates. She ensures that the Commissary staff has enough materials available for each of the events. There are seven coordinated enrichment days through the year that include: Eggs, Paws and Claws (weekend before Easter), Cinco de Mayo (May), Enrichment Day (June), Block-N-Roll (July), Melon Mania (August), Pumpkin Smash (two weekends in October) and Santa Paws (December). In the North American Region where she works, Alicia assists in creating monthly enrichment calendars for each of the animals. This gives the staff the ability to prepare enrichment items ahead of time, makes sure that items are routinely rotated and helps assess what items are actually being used by the animals in order to phase out unused items. At Columbus, Alicia was a committee participant that designed enrichment protocols for AZA accreditation and keeper husbandry manuals. She is responsible for documenting enrichment through videos and posters. She also coordinates workshops where docents and keepers work together in order to construct enrichment items.

Alicia's commitment to enrichment is not limited to the actual implementation and process at the animal and keeper levels. Her passion is seen through all of the ways she provides enrichment awareness and education to the zoo guests. Through the enrichment committee, she has helped implement signage in order to increase public understanding of what enrichment is and what it does

for the animals. Along with the signage, she also provides enrichment activity tables for Earth Day and International Migratory Bird Day. She works closely with the education department "camp-ins" and "summer experience" groups where participants create enrichment items and observe keepers providing the enrichment to the animals. Alicia assisted in the development of an enrichment coloring book that is utilized during enrichment events and keeper talks. The Columbus Zoo's membership newsletter includes an enrichment section that Alicia provides articles and information to.

Alicia's amazing commitment to enrichment shines through in the amount of time and energy she spends inspiring others to enrich and educate. She not only tries to improve the quality of every animal's life, but she equally tries to make every visitor's experience at the zoo more enjoyable and educational. Congratulations Alicia on making a difference through all of your hard work!

(The preceding article contains information submitted to the AAZK Enrichment Committee via the Environmental Enrichment Award Nomination Ballot).

*The AAZK Enrichment Committee would like to thank the following companies for their generous contribution of prizes for the Enrichment/Training Video Night and Enrichment Workshop at the 2004 National Conference.*



***The Leather Elves***

***www.leatherelves.com***

***Sanctuary Supplies***

***www.sanctuariesupplies.com***



***Otto Environmental***

***www.ottoenvironmental.com***



*(Ideas appearing in this column have not necessarily been tested by the editors for safety considerations. Always think ahead and use good judgement when trying new ideas. You are invited to submit material for the Enrichment Options Column. Look in the January 2004 issue of AKF for guidelines for articles acceptable for this column's format or contact the editor at akfeditor@zk.kscoxmail.com for a copy of the guidelines. Drawings and photos of enrichment are encouraged. Send to: AKF/Enrichment, 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054, USA. Eds.)*

*Institutions wishing to advertise employment opportunities are asked to send pertinent data by the 10th of each month to: Opportunity Knocks/AKF, 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054. Please include closing date for positions available, and when setting these dates keep in mind that because of bulk-mail, most readers do not receive their AKF until the middle of the month or later. There is no charge for this service and fax or e-mail listings of positions which become available close to deadline are accepted. Our Fax is (785) 273-1980; e-mail: akfeditor@zk.kscoxmail.com< Listing must be sent as MS Word attachment. To post a position on the AZK website, have listing to email address above by the 25th of the month for posting on the first day of the following month. We are no longer located at the Topeka Zoo, so please note new address to avoid delays in processing.*

**General Curator in Charge of Mammal and Bird Departments** - Cougar Mountain Zoo, Issaquah, WA  
Please mail resumé and references to: Cougar Mountain Zoo, 19525 SE 54<sup>th</sup> St. Issaquah, Washington 98027 or Fax: 425-392-1076 or E-mail: cougarmzoo@aol.com< **Responsibilities** include hands-on tasks and all related functions of animal management. **Requirements:** Candidate must have bachelor degree in related field and five (5) years of paid zoo experience. Added zoo experience may be substituted for up to two (2) years of the education. Candidate must have supervisory and communication skills, managing seven keepers, volunteers, interns and support staff. Salary is competitive and dependent on qualifications with excellent benefits.

**Team Leader - Mammal Dept.: Pachyderm/Hoofstock** - Memphis Zoo, Memphis, TN  
Applications may be downloaded from the Zoo's website ([www.memphiszoo.org](http://www.memphiszoo.org) <<http://www.memphiszoo.org>>) or obtained from the Zoo's receptionist, submitted at the Zoo or mailed to Human Resources, Memphis Zoo, 2000 Prentiss Place, Memphis, TN 38112. Attach cover letter, resumé, three (3) professional references, salary history and expectations to application. Walk-in interviews, phone calls, and email are not accepted. EOE. **Responsibilities:** Under the direction of the Assistant Curator of Mammals (Hoofstock), this full-time position will act as frontline manager and keeper. Responsibilities include the day-to-day husbandry and maintenance of the assigned area, leading the elephant training team (protected contact) and assisting the Assistant Curator with the following tasks, as assigned: assist with animal records, animal shipments, area payroll and scheduling, staff evaluations; represent the department at professional and scientific meetings; present reports; participate in discussions and other duties as assigned to lead the area staff to excellence and in support of the Memphis Zoo. **Requirements:** This position requires: five (5) years experience in exotic animal care, three years elephant handling experience, excellent interpersonal skills, well-developed organizational skills, demonstrated ability to lead and motivate others in a team atmosphere. The successful candidate should have a B.S. degree in biology or a related field or comparable combination of education and experience. The ability to think creatively and act innovatively is strongly desired.

**The following two job positions are available at the Muskoka Wildlife Centre in Ontario, Canada. If you are interested in applying for either position please fax your resume to (705) 689 0223, and include a minimum of two (2) field-related references.**

**Senior Animal Keeper** (full time / year round, competitive wages)  
**Responsibilities:**The care and maintenance of 60+ native Ontario species of wildlife. Species include: eagles, moose, wolverine, bear, beaver, etc. **Requirements:** Applicants must have a minimum of three (3) years keeping experience and a general knowledge of wildlife native to our province. Must also be independent and self driven, hard working, handy, physically able, organized and good at communicating.

**Wildlife Educator** (full time / year round, competitive wages)  
**Responsibilities:** Teaching the public (all ages) about Ontario wildlife. Creating and implementing nature/wildlife programs, activities and initiatives. Traveling is part of this position as it will include heading up our live animal outreach team (Canada's largest live animal outreach program). There will also be animal handling required. **Requirements:** Applicant must have a broad range of knowledge of Ontario wildlife and nature in general and a passion for teaching. An ability to public speak to groups of up to 1000 people at one time is essential. Hands-on experience with animals is also helpful although not necessary. Applicant must have a valid driver's license and must also be mature, responsible, well written, organized and flexible with hours.

**Lead Keeper of Large Mammals Hoofstock and Rhino Department** - Zoo Atlanta, Atlanta, GA  
Zoo Atlanta offers a highly competitive salary and benefits package. Send resumé to: Human Resources Zoo Atlanta, 800 Cherokee Avenue, SE, Atlanta, GA 30315. [Employmentopportunity@zooatlanta.org](mailto:Employmentopportunity@zooatlanta.org)< Fax: (404) 624-5833 (Equal Opportunity Employer). The Lead Keeper of this department is responsible for animal husbandry, maintenance of exhibits, holding areas, and public areas of the Hoofstock and Rhino department. This position reports to the Curator/Assistant Curator as appropriate. The position also implements departmental activities, helps the area manager oversee staff and staff training. This is a salaried position. Salary is commensurate with experience.**Responsibilities:** With the Curator/Assistant Curator, responsible for staff

schedules and daily implementation of policies, procedures and protocols to ensure the highest standards of care; participates in daily animal husbandry including participating in daily routines, learning and working multiple large mammal routines, and exhibiting a high level of performance of general keeper duties including animal care, facility maintenance, and visitor service; supervises keepers and the training of routines and animal management skills; demonstrate strong and positive leadership through example, fully supporting Zoo Atlanta's Management team, strategic management plans, and working with keepers to support these plans; actively foster constructive attitudes and a team orientation among staff plus the ability to appropriately delegate responsibilities; actively participates in workshops, seminars, activities and conferences aimed at continually improving technical skills; represents Zoo Atlanta by participating in appropriate AZA programs, TAGs, SSPs, studbooks etc.; responsible for special projects, procedures, and goals set forth by the Curator or Assistant Curator; responsible for maintaining the highest level of safety in the work area through staff training and implementation of safety protocols and procedures; in conjunction with the Curator/Assistant Curator, acts as coordinator regarding veterinary concerns, General Curator, marketing, education, maintenance, horticulture and other departments; other duties as assigned. **Requirements:** Four-year degree in biology, psychology, zoology or related field; must have five (5) years experience in animal husbandry preferably at an AZA institution. Experience with ungulates preferred; must have a strong background in animal training and enrichment; experience with behavioral research studies is a plus; familiarity with exhibit design, maintenance and construction a plus; Strong organizational and time management skills and the willingness to oversee the daily running of the department as needed; must have demonstrated leadership and personnel management skills and the ability to lead a team; must possess excellent communications skills and willingness to interact positively with guests and other zoo staff; Must be willing to work weekends and holidays, outdoors in inclement weather and able to lift 80lbs. repetitively; and must be able to obtain a Georgia Drivers License.

#### **Zoo Keeper** – Claws 'N' Paws Wild Animal Park, Lake Ariel, PA

Send resumé to: Vince Hall, Claws 'N' Paws Wild Animal Park, Box 1932 Ledgesdale Road, Lake Ariel, PA 18436 or email to [vincehall@echoes.net](mailto:vincehall@echoes.net)< Looking for a full-time keeper who is self-motivated to help care for a collection of over 120 species of mammals, birds and reptiles. We offer competitive salary, paid insurance, sick days and vacation. **Responsibilities:** include all phases of animal care, and also scheduled live animal presentations to our visitors. **Requirements:** applicant should have had paid experience in a zoo setting and have a degree in an animal-related field. Person selected should be able to work with a minimum of supervision and be able and willing to attend to any minor maintenance required.

#### **Wildlife Educator** - Animal Edutainment Inc, Aubrey, TX

Direct inquiries and resumé to: Animal Edutainment Inc., Attn: Dave Kleven, 7151 Cedar Lake Rd. Aubrey, TX 76227; (940) 365-9741; Fax (940) 440-3564 [critterman@animaled.com](mailto:critterman@animaled.com)< For more information about our organization, check-out [www.critterman.com](http://www.critterman.com) . Position for Animal Edutainment, Inc.'s Animal Ambassador outreach program serving the Dallas/Fort Worth and surrounding areas. Located 14 miles from Denton, TX - home of two universities. **Position available until filled.** **Responsibilities** include: daily care and maintenance of animal compound; handling of a diverse group of animals; and public speaking/program presentation. **Requirements:** Must have a professional appearance and outstanding "people skills". Non-smoker, no facial piercing or tattoos that cannot be covered by clothing. Must have a lively personality and charismatic presence. Ability to work both independently, and as a team player. Must have a valid driver's license, clean driving record, be able to lift 50lbs., and have a sense of humor. Must demonstrate the ability to listen and follow directions. Prefer animal-related education/degrees or related work experience with animals or public presentations. Starting \$9.00 to \$10.00 per hr., plus medical stipend.

#### **Aviculture Internship** - International Crane Foundation, Baraboo, WI

Applicants should submit a cover letter, resumé, and three (3) letters of recommendation to Kelly Maguire-Aviculture Internships, International Crane Foundation, P.O. Box 447, Baraboo, WI 53913. Final candidates will be notified for a phone or in-person interview. Stipend is \$375/month plus housing provided on site. ICF is a non-profit conservation organization that works worldwide to save the fifteen species of cranes and their habitat by providing experience, knowledge and inspiration to people. Aviculture interns receive hands-on training in the care and management of endangered cranes. †Interns will be exposed to general crane husbandry, handling techniques, health care, incubation, artificial insemination, behavior, and breeding management. **Responsibilities:** vary by season and include daily cleaning, food provisions and other care of adult cranes and chicks comprise half of the job. Other tasks include annual facilities maintenance, pen repair, video monitoring, chick rearing and assisting full-time staff with projects. **Requirements:** Two years of college or other practical experience with knowledge of and interest in bird conservation. Persons with 4-year college degrees are preferred. Must be able to carry a 50-pound feed bag and do hard work outdoors, in all weather conditions.

### **Outreach Program Director - Kentucky Reptile Zoo, Slade, KY**

This is a full time position. **Responsibilities:** will include traveling to and giving reptile outreach programs to locations within 100 miles; scheduling and advertising the programs; and husbandry of the education animals. **Requirements:** include a Bachelor's degree in related field, at least one (1) year's experience in an educational setting, and a willingness to handle snakes and other reptiles. Patience and good verbal communication skills are a must. Programs are given to schools, camps, parks and other community organizations in the area, as well as to field trips at the zoo's facility. The educator may use the zoo's vehicles to travel to programs; a valid driver's license and a good driving record are required. Kentucky Reptile Zoo's programs stress conservation and strive to include snakes and other misunderstood reptiles as part of our important natural heritage. The successful applicant will be passionate about conservation and natural history education. Pay will be based on program fees; 60% of each fee will go to the educator. This position is **open until filled**; please apply immediately if interested.

### **Internship - Kentucky Reptile Zoo, Slade, KY**

Students majoring in the biological or natural sciences are preferred. Interns are required to be either college students or recent graduates. Former interns have arranged for academic credit with their institutions. Benefits include experience with one of the most extensive and diverse collection of snakes in the United States, housing, and \$55/week to cover expenses. Interns have been successful in finding zoo keeper positions; over 95% hire rate! **Responsibilities:** The intern will assist in the captive maintenance of the zoo's reptile collection, collect admissions to the exhibit, give interpretive talks and interact with the public, assist with educational outreach programs, and perform other duties as assigned. In addition, the intern will be responsible for the completion of at least one research project related to the field of herpetology. The intern will **not** be involved in the handling of any venomous species. **Requirements:** Desirable qualifications include a willingness to handle snakes and other reptiles on a daily basis, ability to communicate effectively with people, writing skills, orientation to details, and self-motivation. The intern will be required to work Saturday and Sunday, with days off during the week. Students majoring in the biological or natural sciences are preferred. Interns are required to be either college students or recent graduates. Former interns have arranged for academic credit with their institutions. Benefits include experience with one of the most extensive and diverse collection of snakes in the United States, housing, and \$55/week to cover expenses. Interns have been successful in finding zoo keeper positions; over 95% hire rate! Personal transportation is recommended. A valid driver's license is required. Starting dates are flexible, but a minimum of three (3) months covering fall (September-November) is required.

### **Volunteer and Intern Positions - Wildlife Care Association, Sacramento, CA.**

To apply, please contact WCA by any of the following methods: Phone: 916-965-WILD; E-mail: [wcavolunteers@hotmail.com](mailto:wcavolunteers@hotmail.com)< Online: <http://www.wildlifecareassociation.net/>> Please include your name, phone number, e-mail, what you how interested in helping, and any questions you may have. We will answer your questions and send you an application. Wildlife Care Association (WCA) is a non-profit, independent, volunteer-based association located in Sacramento that is permitted to care for wildlife. Concerned citizens and other agencies bring in over 6,000 sick, orphaned, and injured animals each year. With the help of volunteers, staff, and local vets, WCA provides medical services to these animals. Once the animals have recovered from their injuries or illness, or have grown and learned to hunt and fend for themselves, they are released into the wild, giving them a second chance at life. **Opportunities/Responsibilities**—Year-round, we have opportunities for phone volunteers (who provide valuable information to the public) and home rehabbers (require license). During baby-bird season (early April through late August), we have additional positions for everything from facility volunteers (who feed birds, do meds, make food, and clean) and interns (who will also learn about triage, while receiving school credit) to front desk people (who greet the public) and from transporters (who use their vehicle to get animals to us) to people who do data entry. Many other opportunities exist, so feel free to contact us if you are interested! Additionally, even if you miss the baby-bird season this year, please contact us and we will make sure you have the opportunity to be involved next year! **Requirements:** Vary with opportunity, but usually include an age requirement and a minimum time commitment.

### **Aviculture Interns - Hawaiian Endangered Bird Conservation Program**

Program is at the Kauhau Bird Conservation Center (KBCC) on the Big Island of Hawaii and the Maui Bird Conservation Center (MBCC) in the island of Maui. For more information on internships at KBCC, please send a resumé, cover letter, and the names and contact information of three (3) references to: Tracey Goltz, P.O. Box 39, Volcano, HI 96785 or fax (808) 985-7034. For more information on internships at MBCC, please send this same information to: Mary Schwartz, 2375 Olinda Road, Makawao, HI 96768 or fax to (808) 572-3574. PLEASE, no phone calls or emails. **Responsibilities:** daily tasks include husbandry duties such as diet preparation, aviary and facility maintenance, behavioral observations of breeding birds, grounds keeping and predator control. **Requirements:** applicant must be able to live with several roommates in a remote area and should show enthusiasm for work with captive endangered Hawaiian birds. Applicant must have a valid driver's license and health insurance. Internships last for a 3-6 month period and interns receive \$20/day stipend plus housing.

### **Big Cat Internship - Tiger Creek Wildlife Refuge (TCWR), Tyler, TX**

For more information and to download an application packet, see [www.tigercreek.org](http://www.tigercreek.org). **Responsibilities:** The Big Cat Internship involves Animal Care Apprentice and Public Education. This is a 90-day position (by 4 quarters/terms) allowing one to gain experience in the zoological field. Job duties include cleaning, diet preparation, light maintenance, educational tours, etc. Interns are responsible for the daily cleaning and health monitoring of a number of exotic feline species including but not limited to: tigers, lions, leopards and pumas. Big Cat Internship opportunities also include working in environmental education with schools and scout groups in a variety of learning activities. You will present short guided lessons on animal care techniques, conservation and rescue methods, backgrounds on the big cats and much more. This wide variety of teaching opportunities and educational training provides the intern with an exciting array of new skills and experiences. Training is provided by the staff. **Requirements:** At least two (2) years of undergraduate college work in wildlife management, education, biology, or related field. If no college experience then one (1) year in related field required. Applicants must be at least 20 years of age. Animal care experience preferred. These positions require motivated persons with a degree focus in biology/zoology and some experience with a related organization. Housing is provided. Interns provide a strong commitment to the refuge, with a six day work week and light duties on Sundays.

**Environmental Interpretation and Wildlife Care Internship** – Trailside Museums and Wildlife Center, Bear Mountain State Park, Bear Mountain, NY 10911-0427. Contact: Jennifer Verstraete at (845) 786-2701 ext. 278 or 265; email – [clayne.keith-feller@oprhp.state.ny.us](mailto:clayne.keith-feller@oprhp.state.ny.us) Start Dates: Summer internship mid-May through mid-August; Fall internship late-August/early September through early November. Internship is unpaid, but provides knowledge and experience; written evaluation gladly given. Possible course credit if intern can arrange it. Interns will work at least three (3) days a week, including one weekend day. No housing available. We reimburse full payment for required pre-exposure rabies series. Qualifications: Enthusiasm, comfortable handling animals, motivated to learn. Must be 18 or older; preference given to college student looking for experience in the care of wildlife and in environmental interpretation. **Responsibilities:** 1) Provide care for permanently injured or orphaned park wildlife (mammals, birds, fish, amphibians and reptiles) in zoo setting. Under the supervision of a Senior Zookeeper will prepare food and diets, maintain enclosures and exhibits, and provide enrichment; 2) Interact with the public answering questions, interpreting exhibits, possibly developing and offering short interpretive talks.

### **Big Cat Internship – Wildlife on Easy Street, Tampa, FL**

For more information contact Scott Lope at 813-323-5991 or email at [catfoto1@aol.com](mailto:catfoto1@aol.com). Two (2) positions available for six-month internship at TAOS accredited non-profit big cat sanctuary. [www.wildlifeoneasystreet.com](http://www.wildlifeoneasystreet.com) **Responsibilities** (include but are not limited to): daily husbandry, exhibit cleaning, diet preparation, feeding, operant conditioning and behavioral enrichment for the following species: lions, tigers, leopards, cougars, lynxes, servals, caracals, bobcats, lemurs and other exotic animals. We provide invaluable hands-on experience, on-site housing and utilities, safety training and educational materials. Advanced training and long-term employment opportunities exist for the right candidates. **Requirements:** applicants must be willing to work six days a week, some holidays and follow strict safety guidelines. Hard work ethic and love of animals more important than degree.

### **Internships - The Florida Aquarium, Tampa, FL**

Internships are available in Animal Health, Animal Programs and Husbandry departments. Internships available year-round for varying lengths of time and can be tailored to the individual student's needs. Internships are unpaid but provide valuable hands-on experience. Interested persons should send resumé to: Human Resources, 701 Channelside Dr., Tampa, FL 33602. For more information visit our website at [www.flaquarium.org](http://www.flaquarium.org). **Responsibilities:** food preparation, feeding, cleaning enclosures, assist with medical procedures, animal observations, daily record keeping, enrichment activities, assist with training sessions and shows.

### **Zoo Design Internship - ZooLex, Vienna, Austria**

In 2002 the ZooLex Zoo Design Organization started to offer internships. Carlyn Worstell was our first intern. She finished her internship with the ZooLex Zoo Design Organization in September 2003 and is now working with the Wildlife Conservation Society at Bronx Zoo. We offer internships in Vienna, Austria. Interns who stay for a few weeks only, mainly work on the ZooLex Gallery. Interns who stay longer also complete a research project. You will find more information on ZooLex internships here: <http://www.zoolex.org/intern.html>. ZooLex Zoo Design Organization is a non-profit organization registered in Austria. ZooLex runs a professional zoo design website and distributes a newsletter. More information and contact: <http://www.zoolex.org/home.html>

The following three (3) internship opportunities are available at the New Jersey State Aquarium - The New Jersey State Aquarium husbandry department is currently holding open enrollment on all our internships.

### **Avian Internship**

Interested candidates should submit a cover letter and resumé, transcripts, three (3) letters of recommendation, and an application from our website at [www.njaquarium.org](http://www.njaquarium.org). Please submit materials to: New Jersey State Aquarium, c/o Kyla Fox, One Riverside Drive, Camden, NJ 08103. Become familiar with daily activities involving our colony of African penguins, exotic birds, and reptile collection. **Responsibilities:** Duties include food preparation, exhibit maintenance, and creation of enrichment devices. **Requirements:** Candidates should be comfortable with public speaking and have course work in biology/psychology. Must be able to work outdoors and lift 50 pounds. Interns are required to complete a minimum of 120 hours and must be registered for college credits in either a two or four-year school. Internships may be completed during spring, summer, or fall sessions. All intern positions are on a volunteer basis and are unpaid.

### **Marine Mammal Internship**

Interested candidates should submit a cover letter and resumé, transcripts, three (3) letters of recommendation, and an application from our website at [www.njaquarium.org](http://www.njaquarium.org). Please submit materials to New Jersey State Aquarium, c/o Collette Caprio, One Riverside Drive, Camden, NJ 08103. Learn daily activities involving animal care and training with our Seal Team. **Responsibilities:** Duties include food preparation, exhibit cleaning, creating enrichment devices and observing training. **Requirements:** Candidates should be comfortable with public speaking, have course work in biology/psychology, prior animal experience, be able to work outdoors, and lift 50lbs. Interns are required to complete a minimum of 120 hours and must be registered for college credits in either a two or four-year school. Internships may be completed during spring, summer, or fall sessions. All intern positions are on a volunteer basis and are unpaid.

### **Fish and Invertebrate Internship**

Interested candidates should submit a cover letter and resumé, transcripts, three (3) letters of recommendation, and an application from our website at [www.njaquarium.org](http://www.njaquarium.org). Please submit materials to New Jersey State Aquarium, c/o Nicole Grandinetti, One Riverside Drive, Camden, NJ 08103. The Fish and Invertebrate department offers internships each semester to qualifying candidates. **Responsibilities:** The intern's main responsibilities will be assisting the biologists with their daily duties including exhibit and holding tank maintenance, food preparation, feeding, filter maintenance, and learning all aspects on maintaining saltwater exhibits. **Requirements:** Interns must complete 120 hours within the semester working two eight-hour days. The typical hours for the day are from 7:30am to 4:30pm. Interns are also required to be registered for credits through a two or four-year institution. All Interns work under a volunteer basis and are unpaid.

### **Internship Opportunities - National Aquarium in Baltimore**

To apply for any of the following internship positions go online at [www.aqua.org/education/internships](http://www.aqua.org/education/internships) to obtain an application form. A complete application includes contact information, answers to brief statements listed, and a copy of college transcript. Complete applications should be sent to: National Aquarium at Baltimore-Internships, Pier 3/501 East Pratt St., Baltimore, MD 21202.

Application Deadline: ongoing - 1 April 2005 for Summer and Fall 2005 terms; All interns must complete a minimum of 120 hours of work within the selected term. Interns must receive college credit for their internship. Internships are unpaid. For further information contact the National Aquarium in Baltimore's Internship coordinator at [intern@aquarium.org](mailto:intern@aquarium.org) or call (410) 576-3888.

### **Aquarist Intern**

**Responsibilities:** The selected candidate will assist the Aquarium aquarist staff with daily care of the Aquarium's invertebrates and fish. Assist with tank maintenance and cleaning; Prepare daily diets and perform daily feedings; Assist in the maintenance of back-up areas; Conduct precise record keeping; Perform special projects to be determined by the aquarist staff. **Requirements:** College juniors or seniors enrolled in an accredited college, pursuing a degree in Biology, Ecology, Environmental Science, or a related field. Must be able to lift 50 lbs, climb up a 6' ladder, and be able to squeeze across a 15' long x 12" wide platform.

### **Aviculture Intern**

**Responsibilities:** The selected candidate will assist the Aquarium aviculture staff with daily husbandry activities in the South American Rainforest exhibit. Assist with and perform diet preparation and distribution; Conduct animal observations; Assist in the cleaning of holding areas, kitchen, and food prep areas; Provide enrichment to the aviculture collection; Perform special projects as determined by the aviculture staff. **Requirements:** Interest in working with birds. Enrolled in an accredited college, pursuing a degree in Biology, Zoology, Animal Behavior, Ecology, Environmental Science, or a related field.



### Herpetology Intern

**Responsibilities:** Tend the “Hidden Life” exhibits (large wall terrariums where small, neotropical lizards, frogs, snakes and invertebrates are on public display); Mist and clean the off-exhibit colony of small arboreal lizards; Mist, clean and otherwise help tend the large, off-exhibit collection of neotropical frogs; Prepare diets for and feed the on and off-exhibit iguanas and tortoises; Tend the locust (live food) colony, orb-weaving spiders and colonies of non-venomous exotic arthropods (wood and hissing roaches, millipedes and walking sticks); Assist in the maintenance of the live food cultures (fruit flies, springtails, crickets, rats, mice); Conduct and record animal observations; Perform special projects as determined by the herpetology staff. **Requirements:** Must be enrolled in an accredited college, pursuing a degree in Biology, Zoology, Animal Behavior, Ecology, Environmental Science or a related field. Must be comfortable working with frogs, lizards, rodents and terrestrial arthropods.

### Horticulture Intern

**Responsibilities:** The selected candidate will assist the Aquarium horticulture staff with daily activities. Assist with care of plants in the Rain Forest exhibits; Conduct plant maintenance, fertilization, propagation, and transplantation; Assist in display development; Perform special projects as determined by the horticulture staff. **Requirements:** Must be enrolled in an accredited college, pursuing a degree in Biology, Ecology, Environmental Science, or a related field.

### Marine Animal Rescue Program (MARP) Intern

**Responsibilities:** The selected candidate will aid in all aspects of marine animals rescue program (MARP) operations, which involves the rescue, rehabilitation, and release of stranded marine mammals and sea turtles and implementing outreach efforts of the Aquarium’s Ocean Health Initiative. The selected candidate is also responsible for technical and clerical assistance for the Conservation Department staff as necessary. **Duties include:** Animal Care – participating in rescue and release trips, daily feeding, medical treatments, facility maintenance including cleaning and water changes, behavioral observations, and record keeping; Outreach – learning to interpret the MARP artifacts and conservation messages and participation in seasonal outreach and public education programs at the Aquarium and off site; Other duties as assigned – field work, etc. **Requirements:** Must be college junior or senior majoring in environmental science or related field with course work in biology and ecology. Summer and January terms require 40 hours per week of work for 4 weeks. Spring and fall terms require 8 hours per day, one day per week of work.

### Marine Mammal Trainer Intern

**Responsibilities:** The selected candidate is responsible for providing support to the marine mammal training staff. This internship’s primary purpose is to teach the intern training theory. *There is limited hands-on animal contact during the internship.* **Duties will include:** Prepares daily animal diets and dispenses vitamins as instructed; Responsible for the cleanliness and safety of all animal back-up areas; Assists in training, husbandry, and medical sessions; Participates in pre-show and pre-session preparations; Periodically participates in sessions involving swimming during enrichment and play sessions – no animals involved; Other duties as assigned. – **Requirements:** Must be college junior or senior majoring in life science or related field. Must have a basic understanding of marine mammal natural history. Must have good swimming skills. Must work well as a team member. Summer and January terms require 40 hours per week of work for 4 weeks. Spring and fall terms require 8 hours per day, one day per week of work.

### Water Quality Lab Intern

**Responsibilities:** The selected candidate will assist in the water quality testing of all fish and mammal systems throughout the aquarium. Duties include testing water for salinity, pH, ammonia, nitrite, alkalinity, and copper according to lab procedures, and recording neat, accurate data. The selected candidate will work closely with the Lab Technicians and the Animal Husbandry staff. **Requirements:** Must be college junior or senior with general biology and chemistry work. Strong math skills and computer proficiency preferred. Must be available to work mornings.

### SOS Rhino Seeks Volunteers

SOS Rhino is looking for volunteers interested in helping us in our efforts to save the Sumatran rhinoceros. Our Borneo Team is studying the demographics of the remaining animals in Tabin Wildlife Reserve to determine when patrol units, habitat protection, or translocation may play a role in the rhinos’ survival. Please visit SOS Rhino’s web site for detailed information: <http://www.sosrhino.org/programs/volunteer.php> Or contact Cindy Salopek, Projects Associate/SOS Rhino via e-mail at: [cindy@sosrhino.org](mailto:cindy@sosrhino.org)

### Volunteer Positions - Orangutan Health Project in Sumatra, Indonesia

A research project, now in its 5th year, aims to discover more about the special behaviors and ecological conditions necessary for the maintenance of health in wild orangutans. MVDr. Ivona Foitova leads a truly international

team of scientists in an attempt to improve the environment of captive orangutans, and the chances of work on the ground also helps to guard the forest against the devastating impacts of logging on the natural habitat of one of the last great apes. **Responsibilities:** volunteers will be part of the team helping in every way - from simple data entry and getting supplies for our base, to locating, counting or following wild orangutans in the forest of North Sumatra. This may not always be enjoyable, but it will certainly be memorable. For more information on the project and our volunteer program, log on to: <http://www.orangutan-health.org> or email us at: [orangutanhealth@indo.nct.id](mailto:orangutanhealth@indo.nct.id)

**The Mauritian Wildlife Foundation Volunteers** - The Mauritian Wildlife Foundation (MWF) is a charitable conservation NGO based in Mauritius working hard to save the endemic fauna and flora of the Mascarenes (Mauritius, Rodrigues and surrounding islets). It is best known for its successes, through partnership with the Durrell Wildlife Conservation Trust's Jersey Zoo, in recovering the Mauritius kestrel from only four birds, the pink pigeon from only a dozen birds and, most recently, the echo parakeet from about 20 birds. Pigeon and parakeet work is intensive and ongoing and new projects are under development for endangered endemic songbirds and reptiles. MWF operates a team of up to 100 or more staff and volunteers working on bird, reptile and plant projects. Volunteers are accepted for six month stays after which they may be asked to join the team for a longer period, according to requirements and performance. Volunteers are expected to finance their own travel, comprehensive insurance, (including repatriation), and living expenses while in Mauritius (the latter approx £150 per month) but receive free accommodation and access to basic office facilities including fax, telephone and Internet. Work on the pink pigeon project consists of supplementary feeding, predator control and monitoring, data collection on breeding and feeding behaviors of the pigeons and may include capture, handling and ringing experience, disease monitoring and control and radio-telemetry. Volunteers are based in basic, but adequate, field stations for five days each week and have the use of a communal residence during the weekends. Volunteers needed for echo parakeet and passerine breeding seasons (Sept through February) will be based either at our residential house near our captive breeding facility and will be largely involved with hand-rearing, captive management and potentially re-introductions, or at one of the field stations involved with nest monitoring, nest manipulation, release and monitoring of wild populations. Any applicant should be hard working, self-motivated and easy going. They must be able to live in isolated and sometimes claustrophobic conditions while maintaining good humor, tolerance of others and, above all, high standards of work. They must have no concerns about humane predator control and be physically and mentally fit and strong. The successful applicant will experience at first hand, a cutting-edge, conservation initiative, learning all the necessary skills and methods, aimed at saving some of the worlds rarest bird species from extinction. Applicants should send (preferably by email) a letter of application and full CV, including two (2) references, (with contact details including telephone and email) to: David Wills, Pink Pigeon Project Coordinator, Mauritian Wildlife Foundation, Grannum Road, Vacoas, Mauritius; Fax(230) 697 6512; [dwills@mwf.intnet.mu](mailto:dwills@mwf.intnet.mu)

**Volunteer Positions Available** - Munda Wanga's Wildlife Park and Sanctuary - Zambia

For more information contact Lee Stewart through e-mail: [sanctuary@zamnet.zm](mailto:sanctuary@zamnet.zm) or take a look at our website: <http://www.mundawanga.com> Three week volunteer opportunities available to keen and enthusiastic people looking to gain hands on experience working at an African wildlife park and sanctuary. Species that you could be working with include lions, tigers, wild dogs, various primates, an American black bear and a baby elephant. Volunteer duties will vary hugely upon volunteer's interest, previous experience and the Park and Sanctuary's priorities, which will vary according to the time of year and what construction/relocation programmes are on at the time. Longer volunteer periods are available depending upon volunteer's experience.

More Zoo vacancies can be seen by visiting:

American Zoo and Aquarium Association - Job Listings  
<http://www.aza.org/JobListings/>

American Association of Zoo Keepers - Opportunity Knocks  
[http://www.aazk.org/aazknew/animalKeepersForum/opportunity\\_knocks.asp](http://www.aazk.org/aazknew/animalKeepersForum/opportunity_knocks.asp)

European Association of Zoos and Aquaria - Vacancies  
<http://www.eaza.net>

Berufsverband der Zootierpfleger e.V  
<http://www.zootierpflege.de>

# AAZK Membership Application

check here if renewal [ ]

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**\$40.00 Associate**

*Those not connected with  
an animal facility*

**\$65.00 or up - Individuals  
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**\$125.00 or up**

**Institutional/Canada**

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(requires Board approval)*

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Mail this application to: AAZK Administrative Offices, 3601 S.W. 29th, Suite 133 Topeka, KS 66614-2054. Make checks/money orders payable to AAZK, Inc. Must be in U. S. FUNDS ONLY. Membership includes a subscription to *Animal Keepers' Forum*. The membership card is good for free admission to many zoos and aquariums in the U.S. and Canada.



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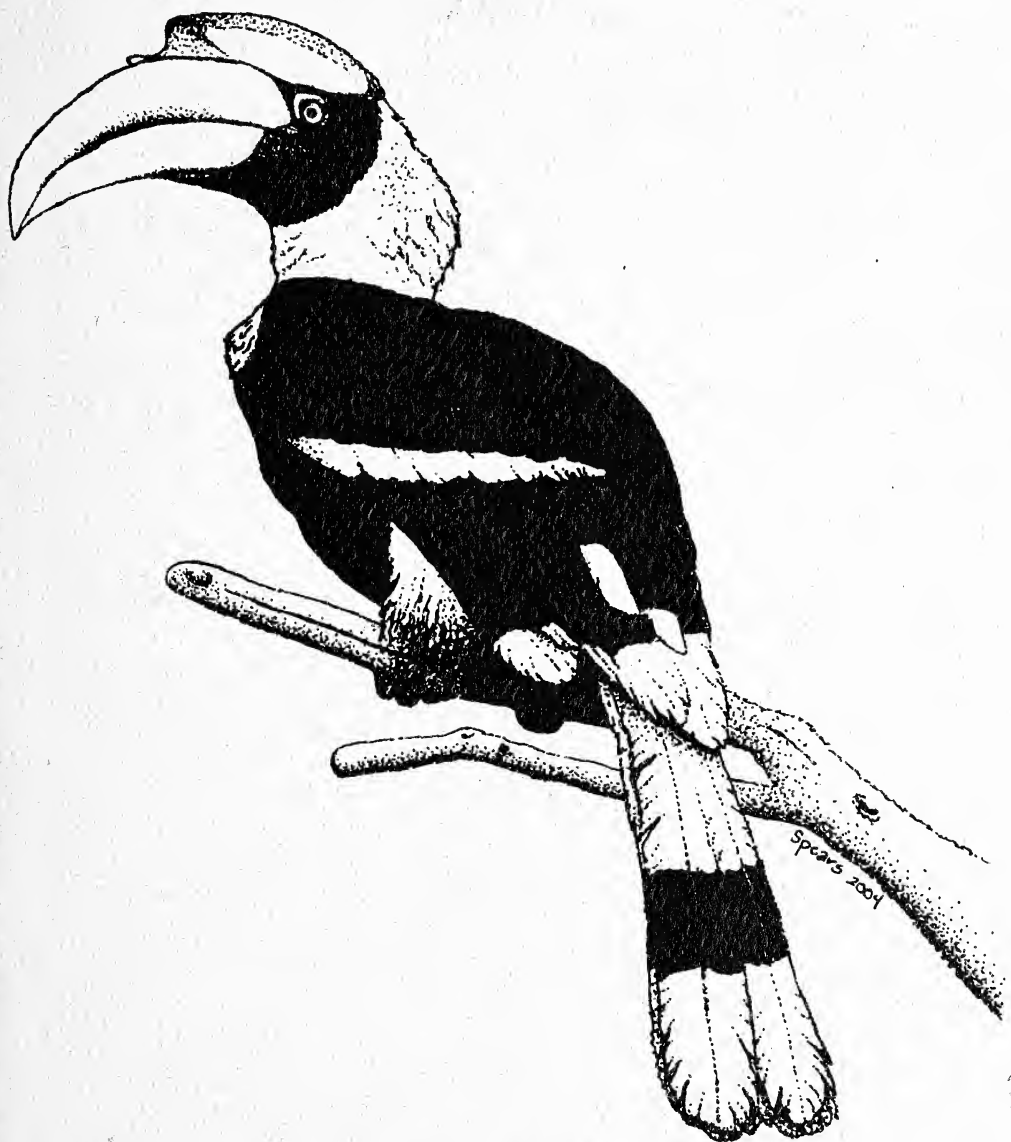
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# ANIMAL KEEPERS' FORUM



The Journal of the American  
Association of Zoo Keepers, Inc.

**DECEMBER 2004**

**Managing Editor:** Susan D. Chan • **Associate Editors:** Kayla Grams, Grand Junction, CO & Mark de Denus, Reid Park Zoo • **Enrichment Options Coordinators:** Dawn Neptune, Utah's Hogle Zoo & Rachel Cantrell, Disney's Animal Kingdom • **Legislative/Conservation Outlook Column Coordinator:** Georgann B. Johnston, Sacramento, CA. • **ABC's Column Coordinator:** Diana Guerrero, Big Bear Lake, CA • **Reactions Column Coordinator:** William K. Baker, Jr., Little Rock Zoo

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**AAZK Executive Director:** Ed Hansen, AAZK, Inc., Topeka KS  
also serves as AAZK Liaison to the American Zoo & Aquarium Association (AZA)

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### **AAZK PUBLICATIONS - CONTINUING DATA COLLECTION**

Biological Information (formerly Biological Values), 4th Edition - Jan Reed-Smith, Columbus Zoo

AAZK Enrichment Notebook 3rd Edition - Lee Houts, Folsom City Zoo



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30th Anniversary  
1974 - 2004

## About the Cover.....

This month's cover features the Great Hornbill (*Buceros bicornis*) of Thailand which is the largest of the hornbills. The cover art was drawn by Kecia Spears, a Keeper at the San Diego Zoo, San Diego, CA. This hornbill species weighs approximately seven pounds ( ) and is around two and a half feet in height ( ). Males and females are similar in appearance; however males have red eyes and females have white eyes. During the breeding season, the female seals herself in the hollow of a tree using her own feces. Here she will lay her clutch which usually consists of two eggs. The male will bring food to the female, feeding her by regurgitation. The casque, or horn on the head, has various functions. It serves as a resonating chamber to amplify sound. It is also an indicator of sexual maturity. The Great Hornbills feathers that appear yellow are actually stained with preen-gland oil. Although their other assumed name, Indian hornbills, implies that they can be found in India, their habitats actually extend to several Southeast Asian countries, such as Thailand, Indonesia, Myanmar (formally known as Burma), and Malaysia. While fruits are their favorite food, Great Hornbills also supplement their diet with lizards, snakes, insects, mice, and other small animals. Thanks, Kecia!

Animal Keepers' Forum publishes original papers and news items of interest to the animal keeping profession. Non-members are welcome to submit articles for consideration. Articles should be typed or hand-printed and double-spaced. Authors are encouraged to submit their manuscripts on a disk as well as in hard copy form. Manuscripts submitted either on disk or electronically as attachments to an email should be submitted in Microsoft WORD. All illustrations, graphs, charts and tables should be clearly marked, in final form and should fit in a page size **no greater than 5.5" x 8.5"** (14cm x 22cm). Literature used should be cited in the text (Brown, 1986) and alphabetically in the final bibliography. Avoid footnotes. Include scientific name (as per ISIS) the first time an animal name is used. Thereafter use common name. Use metric system for weights and measurements (standard equivalents may be noted in parenthesis). Use the continental dating system (day-month-year). Times should be listed as per the 24-hour clock (0800, 1630 hrs. etc.). Glossy black and white **or** color prints (minimum size 3" x 5" [8cm x 14cm] ) are accepted. Clearly marked captions should accompany photos. Please list photo credit on back of photo. Photographs may be submitted electronically as either JPEG or TIFF file attachments.

Articles sent to Animal Keepers' Forum will be reviewed by the editorial staff for publication. Articles of a research or technical nature will be submitted to one or more of the zoo professionals who serve as referees for AKF. No commitment is made to the author, but an effort will be made to publish articles as soon as possible. Lengthy articles may be separated into monthly installments at the discretion of the editor. The editor reserves the right to edit material without consultation unless approval is requested in writing by the author. Materials submitted will not be returned unless accompanied by a stamped, self-addressed, appropriately-sized envelope. Telephone, fax or email contributions of late-breaking news or last-minute insertions are accepted as space allows. Phone 1-800-242-4519 (US); 1-800-468-1966 (Canada); FAX (785) 273-1980; email is [akfeditor@zk.kscoxmail.com](mailto:akfeditor@zk.kscoxmail.com)

**Deadline for each regular issue is the 10th of the preceding month.  
Dedicated issues may have separate deadline dates and will be noted by the editor.**

Articles printed do not necessarily reflect the opinions of the AKF staff or the American Association of Zoo Keepers, Inc. Publication does not indicate endorsement by the Association.

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E-Mail Addresses: You may reach Barbara Manspeaker at AAZK Administrative Offices at: [aazkoffice@zk.kscoxmail.com](mailto:aazkoffice@zk.kscoxmail.com)< You may reach Susan Chan and Animal Keepers' Forum at: [akfeditor@zk.kscoxmail.com](mailto:akfeditor@zk.kscoxmail.com)<

**AAZK Website Address: [www.aazk.org](http://www.aazk.org)**

**BFR Website: <http://bfr.aazk.org>**



# *Scoops & Scuttlebutt*



## Chapters Reminded About Recharter Packets

All Chapter officers are reminded that annual Recharter Packets are mailed in January and must be returned to AAZK Administrative Offices **by 1 March 2005** to avoid paying the \$100 late fee. If you have questions about filling out your forms, contact Barbara Manspeaker at 1-800-242-4519 (U.S.) or 1-800-468-1966 (Canada). You can also reach Barbara via email at [aazkoffice@zk.kscoxml.com](mailto:aazkoffice@zk.kscoxml.com)< Make certain when you return your packets that you have completed all required information and have included a check for your recharter fee. Make a copy for your Chapter's records. Return of these forms is part of the Association's obligation to the Internal Revenue Service under our 501(c)(3) nonprofit tax-exempt status. Failure to have forms returned by all of AAZK's chartered Chapters puts the organization's tax-exempt status in jeopardy, so your full cooperation is greatly appreciated. If you do not have a packet by **1 February 2005**, contact Barbara immediately. Packets are sent to the Chapter President at the address listed on the Chapter's most recent recharter forms.

## UK University Offers Masters in Zoo Conservation

A new Masters degree program at Plymouth University that gives students hands-on experience at a zoo has attracted interest from around the world. Graduates from the USA, Japan, Germany and France have joined British students enrolled for the university's first one-year MSc in Zoo Conservation. Paignton Zoo head of science Dr. Amy Plowman said: "There is no other course like it in this country. The students are not simply learning the theory - they are getting direct experience at the zoo." For further information on the program you may email at [science@plymouth.ac.uk](mailto:science@plymouth.ac.uk) or visit their website at <http://www.plymouth.ac.uk/courses/postgraduate/taught/2678/MSc%2FPgDip+Zoo+Conservation+Biology><

## Animal Training Committee Seeks New Member

The AAZK Animal Training Committee (formerly ABMC) is looking for committee members. Desired qualities include: a demonstrated understanding of animal training techniques, including operant conditioning; several years of experience training animals, preferably in a zoological or aquarium setting; an ability to communicate effectively and to facilitate learning through writing and workshop development and implementation. Institutional support is not mandatory, but is helpful to both the new member and the committee. Interested keepers should send a letter of intent and cover letter to Kim Kezer at the following email address: [kim@kezer.net](mailto:kim@kezer.net). The deadline for application is **31 December 31 2004**.

## The 2nd International Congress on Zookeeping - 1st Call for Papers/Posters/Workshops

After the success of the International Congress on Zookeeping (ICZ) conference in 2003, a second conference is being planned for 7-11 March, 2006 in Gold Coast, Queensland, Australia with more than 300 zookeepers from around the world expected to attend. The conference will cover all areas of zookeeping.

You are invited to submit an abstract of a paper or presentation you would like to give. More information and guidelines can be found at [www.iczoo.org](http://www.iczoo.org)< Abstracts for oral and poster presentations should be written in English and no more than 600 words long. If you want to run a workshop focused on developing zoo keeper skills please send a short description. These should be sent to: Paul Howse, ICZ Programme Committee at [p.howse@chesterzoo.org](mailto:p.howse@chesterzoo.org)< Prefer you send in RTF or MS word format marked 'ICZ Programmme'. **Deadline for submissions is 30 September 2005**.

**Global Networks – Animal Welfare – Husbandry – Conservation – Professionalism - Knowledge**

### **Bear Information Requested - AZA - BEAR TAG Endorsed Husbandry & Health Study**

The 70 current participants in this study include representatives from N. America, Europe, Australia, New Zea Zealand, Africa and South East Asia (with the majority being US participants). I would very much like to recruit more international facilities to participate. The survey is available on my website <http://www.jordanschaul.com> as is a list of the current participants. If you require further information you may contact me at: Jordan C. Schaul, MSDVM/PhD Candidate & Assistant Director (Research Affiliate, Cleveland Metroparks Zoo), Laboratory for Wildlife and Environmental Health, College of Veterinary Medicine, Ohio State University, 1920 Coffey Road, Columbus, OH 43210, USA. Email: [schaul.2@osu.edu](mailto:schaul.2@osu.edu) Lab: 614-292-6924; Mobile: 614-439-4111; Fax: 614-292-4142. Thanks so much.

### **AAZK Grant Programs**

AAZK has several grants available, including Conservation, Restoration & Preservation (CPR), Research, Geraldine Meyer/AAZK Travel Grant, and the AAZK Grant for the Advances In Animal Training Course offered in conjunction with AZA. For further information check the AAZK website or contact Jan Reed-Smith at [jrsotter@iserv.net](mailto:jrsotter@iserv.net)< Deadlines for application are listed below.

### **Deadlines for the AAZK Grants**

#### **AAZK-Geraldine Meyer Professional Travel Grant**

|                        |                |                                 |
|------------------------|----------------|---------------------------------|
| 2 Grants available at: | \$1000.00 each |                                 |
| Application Deadline:  | February 1     | (mid-year consideration)        |
| Application Deadline:  | July 1         | (end of the year consideration) |

#### **AAZK/AZA Advances in Animal Keeping Course Grant**

|                       |           |                                       |
|-----------------------|-----------|---------------------------------------|
| 1 Grant available at: | \$1000.00 |                                       |
| Application Deadline: | July 1    | (of the year before the actual class) |

#### **Conservation, Preservation and Restoration Grant**

|                       |           |   |
|-----------------------|-----------|---|
| 1 Grant available at: | \$1000.00 | (or split between several small projects) |
| Application Deadline: | June 1    | (of the year before the actual project)   |

#### **Research Grant**

|                        |           |   |
|------------------------|-----------|---|
| 2 Grants available at: | \$1000.00 | (or split between several small projects) |
| Application Deadline:  | June 1    | (of the year before the actual project)   |

### **Reminder to All Members on PayPal Option**

We want to remind all AAZK members that you can now use PayPal to renew your membership on-line at the Association's website - [www.aazk.org](http://www.aazk.org)< You may also purchase current AAZK publications and accessories using this credit card option, hopefully making it easier for you to get the products you want. Please be aware, however, that if you are joining or renewing as a Professional member, the PayPal option does not provide us with the name of the zoo or aquarium where you work. So for proper listing in the New Members section of *AKF*, we request that you either call or email us your current work information when you join or renew using the PayPal option. Email to [aazkoffice@zk.kscoxml.com](mailto:aazkoffice@zk.kscoxml.com)< or call the appropriate 800 number listed on the front inside cover of this publication.

## **MOVING?**

Please let us know when you change your address! It now costs AAZK about \$1.00 every time an *AKF* is returned because of an incorrect address. We have more important things to spend the Association's money on! Please call 1-800-242-4519 (U.S.) or 1-800-468-1966 (Canada). If you should get the answering machine, please speak slowly and clearly when giving your address change. Or you may email your address changes to: [aazkoffice@zk.kscoxml.com](mailto:aazkoffice@zk.kscoxml.com)< **Thanks!**



## From the President

First let me say that it was great to see so many of you at conference in Dallas this year. I look forward to renewing ties and catching up every year. The Dallas folks did a great job and it was a great conference. So hats off to the Dallas crew for a job well done. Another year has come and almost gone and with it two of your Board members, Jeannette Beranger and Bob Hayes, have both resigned from the AAZK Board of Directors to pursue other career directions.

Both Bob and Jeannette served this Board with distinction and commitment, and I and the other Board members wish them the best in their new career paths. I have known both of these individuals for quite some time and you can bet they will be missed by this Board. Jeannette will continue to Chair the International Outreach Committee so she will remain actively involved in AAZK matters. There will be a Board Member election this coming year, so for those of you interested in serving on the Board or for those of you who know someone who would be a good choice, make sure and check out the the nomination announcements in the green insert in this *AKF*.

As you know the *AKF* has now been in continuous publication for 30 years. The reason is simple; without your willingness to share your expertise and passion for this profession we would not have an *AKF*. So continue to submit articles and share your information with your fellow keepers.

Also this is just a reminder that Recharter Packets for Chapters will be sent out after the first of the year so keep your eyes open for those. Along with the packets your Chapter should receive an updated copy of the Association's Operations Manual. This manual is now produced on CD in an effort to be more green-conscious. It's a step you'll start to see more and more often in AAZK publications. Take care and be safe.

Denise C. Wagner  
President, AAZK Inc.  
Phoenix, AZ

### **Amazon.com Users -- Don't Forget the AAZK Connection**

Just a reminder that if you regularly (or even occasionally) purchase items on *amazon.com*, there is a way you can also help out the Association while you are doing your shopping. If you go to *amazon.com* from the AAZK Home Page ([www.aazk.org](http://www.aazk.org)), the Association will receive 5% of the cost of your purchase. The *amazon.com* icon is at the bottom right of the AAZK Home Page. And the percentage from purchase of goods is on all items you purchase there - books, music, etc. So next time you want to do a little online shopping at *amazon.com*, get there through the AAZK website and help out your professional organization.

# Coming Events

**6th International Aquarium Congress** - 5-10 December 2004 in Monterey, CA. Hosted by the Monterey Bay Aquarium. Additional information in English, French and Japanese is available online at <http://www.iac2004.org><

**2nd Annual Crissey Zoological Nutrition Symposium** - 10-11 December 2004 at the North Carolina State University School of Veterinary Medicine. The primary focus of the symposium & the key note speaker this year will be on carnivore nutrition, however; day two of the symposium with cover all areas of zoological nutrition and therefore all abstracts are welcome. In the spirit of Dr. Susan Crissey, we hope to introduce many students to new areas of nutrition. For more information please check out the website at: <http://www.cvm.ncsu.edu/content/zoonutrition/>. This website will be updated periodically until the conference.

**Fifth Zoos & Aquariums: Committing to Conservation** - 26-30 January 2005 in Cocoa Beach, FL. Hosted by the Brevard Zoo. This conference will continue to examine and promote the role of zoos and aquaria in supporting *in situ* field research and conservation. Will include keynote speakers, paper sessions, posters. Will be preceded by one-day workshop on North American Conservation Initiatives. For further information please contact Cheri Purnell at (321) 254-9453 ext. 25 or email her at [membership@brevardzoo.org](mailto:membership@brevardzoo.org)<

**ClickerExpo** - 28-30 January 2005 in San Diego, CA. Three days and 40 sessions on operant conditioning and positive reinforcement. Faculty includes Karen Pryor, Thad Lacinak, Ken Ramirez, Kay Laurence, Kathy Sdao and more. In-depth training for all levels of skill, applicable to many species, including: clicker training for medical care; for aggression; using cues as reinforcers; shaping behavior at a distance; developing directional and compound cues; chaining; making training plans; and teaching others. Also current related research. A great resource and learning experience for zoo staffers. To see details or register at [www.clickerexpo.com](http://www.clickerexpo.com) or call 781-784-5354 for more information.

**International Association of Avian Trainers and Educators Annual Conference** - 9-12 February 2005 in Atlanta, GA. Hosted by Zoo Atlanta. For more information visit <http://www.iaate.org><

**ABWAK Symposium 2005** - 5-6 March 2005 at Dudley Zoological Gardens. The 2005 Symposium will focus on: "Zoos - Theory & Practice" and include a range of presentations and workshops covering topics such as: nutrition; conservation (including EAZA Shellshock Campaign); public presentations/keeper talks; interpretation; enrichment and training. ABWAK members benefit from reduced fees; there is also a discount for early booking (before 15th January) Members early fee £30, Non-members early fee £35. To register/book for the symposium contact: Laura Gardner, ABWAK Hon. Secretary, Leeds Castle Aviary,

Leeds Castle, Maidstone, Kent, ME17 1PL, UK. Information on Dudley and special accommodation deal is available from Stephen Woollard at [education@dudleyzoo.org.uk](mailto:education@dudleyzoo.org.uk)

**The National Wildlife Rehabilitators Association Presents Symposium 2005 "Working Together for Wildlife"** - 8-12 March 2005 in Minneapolis, MN., at the Marriott Minneapolis Southwest. Hosted by the Minnesota Wildlife Assistance Cooperative. For further info contact: NWRA Central Office, 14 7th Avenue North, St. Cloud, MN 56303, (320) 259-4086, e-mail [nwra@nwrawildlife.org](mailto:nwra@nwrawildlife.org)< website, <http://www.nwrawildlife.org>

**Fourth Sea Otter Conservation Workshop** - 18-20 March 2005 hosted by Seattle Aquarium, Seattle, WA. Three days of papers, reports and discussion about all aspects of sea otter biology and conservation. Anyone working with sea otters in any capacity is invited to come. Pre-registration is required; discount for early registration (deadline **18 Feb. 2005**). Pre-registration until **11 March 2005**. Info, registration and/or questions contact Dr. Shawn Larson at [shawn.larson@seattle.gov](mailto:shawn.larson@seattle.gov)<

**The 5th Animal Behavior Management Alliance Conference** - 10-15 April 2005 in Houston, TX. Hosted by the Houston Zoo. For more info visit [www.thcabma.org](http://www.thcabma.org)<

**Fourth Rhino Keepers' Workshop** - 5-9 May, 2005 in Columbus, OH. For further information contact Adam.felts@columbuszoo.org<

**Fifth World Congress of Herpetology** - 20-24 June, 2005 at Conservatorium for Music, Stellenbosch University Campus, Stellenbosch, South Africa. Please visit the website <http://www.wits.ac.za/haa/> or contact the organizer at [conf@conferencesetal.co.za](mailto:conf@conferencesetal.co.za)< Dr. Ernst HW Baard Manager: Scientific Services Western Cape Nature Conservation Board, Private Bag 5014 7599, STELLENBOSCH; Tel: +27-21-866 8001; Fax: +27-21-866 1523; Mobile: 082-41 40 424; Scientific Services office no. +27-21-866 8000. Visit our website: <http://www.capanature.org.za>

**The 7th International Conference on Environmental Enrichment** - 31 July - 5 August, 2005 in New York City, NY, USA. The conference is hosted by the Wildlife Conservation Society (WCS) and held at Columbia University. Theme is "Unifying the Art and Science of Animal Enrichment". For more information contact [ICEE2005@wcs.org](mailto:ICEE2005@wcs.org)<

**Second International Congress of Zookeeping (ICZ)** - May 2006 in Gold Coast, Queensland, Australia. Visit website: <http://www.iczoo.org> for latest information. See information on First Call for Papers in the November 2004 issue of *AKF*.

Post Your Coming Event Here - email to:  
[akfeditor@zk.scsoxmail.com](mailto:akfeditor@zk.scsoxmail.com)

# AAZK Announces New Members

## New Professional Members

Tammy Sugrue, **Buffalo Zoo (NY)**; Kristen Massaro, **Seneca Park Zoo (NY)**; Jennifer Frank, **National Zoo (DC)**; John Brickel, **Peace River Center (FL)**; Jonnie Gove, **The Zoo in Naples (FL)**; Jeremy Artigue, **Kentucky Down Under (KY)**; Eric Albers and Bethany Prisky, **Akron Zoological Park (OH)**; Tina M. Slone, **African Safari Wildlife Park (OH)**; BriTaylor, **Potawatomie Zoo (IN)**; Matthew Simon, **Hutchinson Zoo (KS)**; Teresa Shepard, **Omaha's Henry Doorly Zoo (NE)**; Michelle Tacia, **Little Rock Zoo (AR)**; Susan Speer, **Fort Worth Zoo (TX)**; Holly Harrington and Crystal Derusha, **Utah's Hogle Zoo (UT)**; Deborah Calantropio, **Happy Hollow Zoo (CA)**; Heather Johnson, **Oakland Zoo (CA)**; Alex Redman, **Woodland Park zoo (WA)**; Rebecca Stocker, **Point Defiance Zoo (WA)**; and Sherri Nordin, **Calgary Zoo (Alberta, Canada)**.

## Renewing Contributing Members

Mark Hofling, Senior Keeper  
Bronz Zoo (NYZS), Bronx, NY

William H. Disher, Volunteer  
San Diego Zoo and Wild Animal Park  
San Diego, CA/Escondido, CA

*(PLEASE NOTE: If you joined or renewed via the AAZK website and used PayPal, please be aware that we do not receive your zoo affiliation information from PayPal, only your mailing address. If you want your zoo listed with your name when it is published in AKF, please contact our office after you join/renew online to advise us of this information. Call 1-800-242-4519 (US) or 1-800-468-1966 (Canada); or email at aazkoffice@zk.kscocmail.com< Thank you.)*

# Block These Dates! 7-11 May 2006



The Australasian Society of Zoo Keeping (ASZK) wishes to invite you to the **2<sup>nd</sup> International Congress on Zookeeping (ICZ)** to be held on the **Gold Coast, Queensland, Australia**.

Hosted by ASZK in conjunction with the following Zoo Keeper Associations: ABWAK, (Britain), AAZK, (America), AICAS, (Spain), AFSA, (France), BdZ, (Germany) and De Harpij, (The Netherlands), further information can be obtained by visiting <http://www.iczoo.org> or to receive regular updates subscribe to ICZ\_News-[subscribe@yahoogroups.com](mailto:subscribe@yahoogroups.com) or write to ICZ Conference Convenor c/o ASZK, P.O. Box 248, Healesville Vic, AUSTRALIA 3777.

Look forward to seeing you there!!



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# From the Executive Director . . . .

I'd like to take this opportunity to wish you all a safe and happy holiday season. May any obstacle to your wishes and dreams head far south for the winter and just leave you in peace.

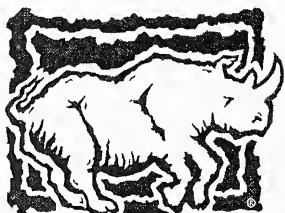
In 2005, the process of Chapter rebirth begins again. Chapter re-charter packets will be mailed the first week in January, and the information and communication process that is so vital to this Association also begins, again. It is critical that Chapters complete the requisite part of the packet (officers, financial information, and dues) in a timely manner to avoid late fees. Our office must report Chapter information to the Internal Revenue Service, by a set deadline, so we rely on your cooperation.

In your packet you will also receive an electronic version of the most recent copy of the Operations Manual for the Association. This is the rulebook, if you will, for operating in the Association. On this CD-Rom you will also receive a handbook on what is involved in hosting a National Conference for the Association.

In 2005, the Professional members of this Association will be asked to complete a survey for AAZK. In addition to the standard salary and educational questions that we use to compliment our non-profit status, the questions on the survey are directed to your personal passion for exotic animal keeping. The survey, conducted in an anonymous format, seeks to get behind the passion, and understand the reasons for animal keeper dedication.

Finally, 2005 is once again a crossroads for the Association. We, the Board and I, continue to struggle with providing a valuable product to our membership. But the economy is killing us. Our membership contributes over \$300,000.00 a year to the Association and we turn right around and give away \$225,000.00 to conservation. You and your generosity are amazing, but the Association continues to walk the financial tightrope of simple existence. With our limited operating budget, we cannot (or it is extremely difficult), to make improvements to the *Animal Keepers' Forum*, or fund additional grants, or offer continuing education workshops, or...., a whole list of concepts we want to offer you.

So I challenge you the member, and you the Chapter, once again. Remember the Association when you come to the donation line in the application for member or Chapter renewal. Chapters. We have 80 of them. Hold one fundraiser per year, for AAZK, a simple concept. A donation of \$500.00 from each Chapter will meet almost 50% of our operating expenses for one year. The survey will tell us the improvements you want the Association to enact, the donations can make it all happen.



AMERICAN  
ASSOCIATION  
of ZOO KEEPERS

Ed Hansen  
AAZK Executive Director  
Tucson, AZ

# AAZK Grants Committee Announces 2004/2005 Grant Recipients

AAZK membership offers many benefits: a forum for professional and personal development; excellent publications (AAZK *Forum*, etc.); annual conferences where colleagues can gather, make new friends and network; website access to the activities and offerings of its many professional committees; and an ever-expanding menu of professional growth resources, one of which is the grant program. This year several people took advantage of this program applying for one of the six grants available annually - Conservation, Preservation & Restoration or CPR Grant (\$1,000.00 available), AAZK Research Grant (\$2,000.00 available annually in two grants), AAZK/AZA Advances in Animal Training Course Grant (\$1,000.00 available annually), and the AAZK/Geraldine Meyer Travel Grant (\$2,000 available annually in two to four grants).

It is with great pleasure the AAZK Grants Committee announces the recipients of the 2004 Travel Grants and the 2005 CPR, Research, and Advances in Animal Keeping Course Grants.

## ***CPR Grant –***

*Kristin Moro, Houston Zoo, Houston, TX - \$285.36*

*“Nobody Doesn’t Like Butterflies: Leading Guests in Conservation”. This project will assist a long-term university-led project to study the possible migratory patterns of monarch butterflies and the decreases in their population size. In addition, it will inspire guest involvement in butterfly conservation and habitat restoration by inviting the zoo’s guests to attend and participate in various functions.*

***Research Grant – No one applied for these grants this year***

## ***AAZK/Geraldine Meyer Travel Grant –***

*Kathy Brader, Smithsonian National Zoological Park, Washington, DC - \$1,000.00*

*Conservation, Education, and Rearing of Kiwis. Kathy has made arrangements to spend time in New Zealand working with Kiwi researchers and captive professionals.*

*Tammy Sundquist, Happy Hollow Park and Zoo, San José, CA - \$500.00*

*Tammy will be attending the AZA Managing for Success: Career Development/AZA Professional Development Course.*

*Joanne Luyster, Louisville Zoological Garden, Louisville, KY - \$500.00*

*Joanne will be attending the Zoos and Aquariums: Committing to Conservation Conference being held at the Brevard Zoo in January 2005.*

## ***AAZK/AZA Advances in Animal Keeping Course***

*Carole Garrett, Folsom City Zoo Sanctuary, Folsom, CA - \$1,000.00*

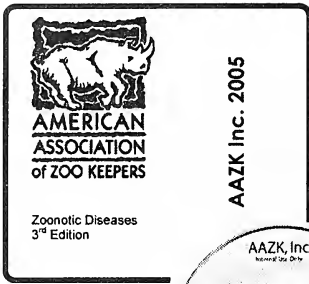
*This is a scholarship for the 2005 course.*

*Congratulations again to Kristin, Kathy, Tammy, Joanne, and Carole; keep up the good work you are doing.*

*To all of the rest of you, these grants sometimes go un-awarded, like the Research grants this year. Apply for them. If you have questions about a project idea contact [jrsotter@iserv.net](mailto:jrsotter@iserv.net) or call Jan at 616-366-1033.*

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Name on Credit Card \_\_\_\_\_

Signature \_\_\_\_\_

*Mail completed Order Form and payment or authorization to: AAZK, Inc., 3601 SW 29th St., Suite 133, Topeka, Kansas 66614-2054 USA. Make checks or money orders payable to "AAZK, Inc." North American phone orders using a Mastercard or VISA credit card may be placed by calling 1-800-242-4519 (U.S.) or 1-800-468-1966 (Canada)*



# 2004 CONFERENCE PROCEEDINGS

If you are interested in ordering a copy of the 2004 Proceedings containing the papers presented at the AAZK National Conference held in Dallas, TX, you will need to fill out and return the form on the next page with the appropriate payment. All orders **must** be prepaid in U.S. Funds ONLY. Conference Proceedings are planned to begin shipment in January 2005. Once shipped, domestic orders should take about two weeks; overseas orders within 10 days by air mail. Prices are as follows:

AAZK Member      \$25.00                      Non-Member      \$40.00

Postage for U.S. orders is included. Canadian orders should add \$5.00 per book for air mail service; all other countries should add \$10.00 per book for air mail service. Checks or money orders should be made payable to "AAZK, Inc." in U.S. FUNDS ONLY.

**Note:** Those presenters who correctly submitted their manuscripts on time for inclusion in the 2004 Conference Proceedings will receive **one gratis** copy. All others wishing a copy must place an order.

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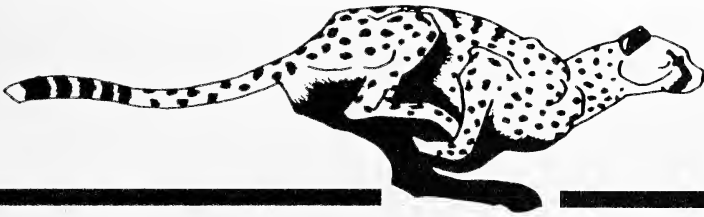
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# REACTIONS

## *A Question and Answer Forum for the Zoo Professional on Crisis Management*

*By William K. Baker, Jr., Curator  
Little Rock Zoo, Little Rock, AR*

### **Question**

When designing an elephant facility are there any specific safety recommendations to keep in mind?

### *Comments*

In my professional experience, designing, building, or renovating an elephant exhibit is one of the most painstaking processes I am aware of. To be sure, there are definitely more technical exhibits such as marine mammal exhibits, but elephant exhibits always seem to have more than their fair share of design glitches.

So, here's the "short list" of things to look for when going through this process.

### Things to Remember:

- Rule Number One, always use a commercial master plan firm or engineering firm that has a proven track record for producing quality elephant exhibits. I would even go so far as to specifically recommend using an AZA Commercial Member firm. Once you have narrowed your field to say three finalists, ask for copies of prints or designs that they have successfully completed for other zoos. Then get on the phone and call the institutions and ask them what they think of their facilities in regards to design, project completion, and overall satisfaction. If this sounds a little extreme, consider that you are about to spend millions and having the right firm from the beginning can make all the difference when it comes to whom you are working with on an exhibit of this nature.
- Rule Number Two, always increase your timetable by a factor of two when planning your construction schedule. These types of exhibits take time to build correctly and you really don't want to rush the process.
- Rule Number Three, always insure that you have at least 10% of your overall budget reserved or added in for cost over-runs and design changes.
- Rule Number Four, always involve your elephant staff and trainers through every step of the design and development process. This way you can avoid costly design changes and the trainers get what they need to do their job effectively.
- Rule Number Five, it's always easier to fix it on paper than it is once the construction starts. This will help prevent cost over-runs and insure that your timetable stays on track. Never sign off on your blueprints until you're sure that what you have will work for you. Design changes on prints cost money too; though nowhere near as much as an actual job change during the construction phase.

Things to watch for:

- Engineers love to design exhibits with blind corners and work areas with a lack of line-of-sight. Essentially, exhibits can be designed to meet the needs of public presentation as well as the needs of the staff. Also, I have always believed that exhibit work areas (night houses) that involve dangerous animals should have a clear field of vision with little if any obstructions.
- Service corridors should always be designed to accommodate not only multiple staff members, but also heavy equipment access as well, (especially within the building) to allow quick repairs and to move heavy equipment as needed to new locations. It's also a real plus for unloading feed and hay into a feed room that should be located next to an adjacent feed room.
- Ideally everything should be located in dedicated rooms, tools, cleaning supplies, feed, and the staff locker room-restroom. This cuts down on clutter, fire hazards, and knowing where your equipment is in an emergency. Fire sensors and alarms, sprinkler systems, a back-up generator, and emergency lighting are pluses.
- There should be a clear delineation between staff access areas versus visitor access areas. A viewing gallery either in a balcony or at ground level is highly recommended. This allows visitors and VIP's to observe operations without disturbing daily animal husbandry and training procedures.
- A dedicated area for crisis equipment is highly recommended. Essentially a firearms room or closet designed directly into the concrete of the buildings structure. The trick is that it has to be temperature and humidity controlled to prevent rust in what is by its very nature, a wet work area, (ex: constant hosing and disinfection on a daily basis of the barn). As far as caliber, think about something in the .300 range for your rifles.

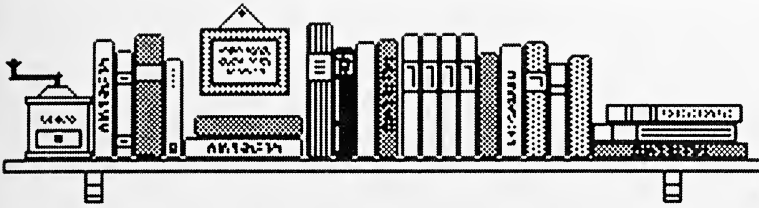
Final Thoughts:

It is virtually impossible to address this issue in detail in a two-page column. However, these are some general points that have served me well throughout my career. Still, the most important thing is to involve your elephant staff in the process. They will see a flaw coming long before the architects and they are intimately aware of what their needs are for this type of situation. In short, listen to the staff.

**Next Month:** Do you have any suggestions on what's the best way to locate and store firearms in a zoological setting?

**If you would like to submit a question for this column or have comments on previously published materials, please send them to AAZK, Inc., 3601 S.W. 29th St., Suite 133, Topeka, KS 66614  
Attn: Reactions/AKF**

(About the Author: Since 1985 Bill has been active in the fields of science, zoology, and wildlife management. His education and experience include a B.S. in wildlife management and post-graduate studies in zoology, Lab and Museum Assistant, Shoot Team Leader, ERT Member, Large Mammal Keeper, Senior Keeper, and Zoo Curator at various zoological facilities. His area of research is crisis management in zoological institutions, which draws upon practical experience and training as



# Book Reviews

## **Dr. Fisher's Life on the Ark**

By Lester E. Fisher D.V.M. \_ 2005

Racom Communications, 815 Ridge Avenue, Evanston, Illinois 60202, U.S.A.

ISBN: 0-9704515-6-3

254 pages, hardback, price \$26.95.

*Review by Phil King, Zoo Foreman*

*Assiniboine Park Zoo, Winnipeg, Manitoba, Canada*

Dr. Lester Fisher, formerly director of Chicago's Lincoln Park Zoo, is something of an anomaly amongst American zoo directors. It is by no means uncommon for such people to move from one zoo to another after serving a period in each one. After serving as contract veterinarian from 1947, Dr Fisher became Director at Lincoln Park in 1962 and remained so for the next 30 years. Few zoos have been so well served by the same person for such a time span, a trait mainly associated with directors of European zoos.

The book is quite an interesting one, easy to read, and reminiscent to me at least of some of the books I read just after I started my career a year after the subject of this book became director. By that I mean that there were points in it such as I would try to remember and use as reference material in later life from earlier books, such as the use of the drug "Surital" to anaesthetise tigers (it apparently takes much longer to work its way out of a tiger's system than in any other cat). Another was a method of treatment of botulism in waterfowl discovered by accident when birds thought to be dead were placed in a freezer only to be discovered alive when being prepared for necropsy, the theory here being that the slowing down of the metabolism permitted some of the birds to recover.

The book is written in a peculiar format of a series of very short chapters, most being about one or two pages in length. In some ways this format could be the basis of an interesting series of television programmes, in a similar vein to the remarkably popular series by British vet James Herriott; so much so in fact that it even includes the obligatory, almost pre-requisite chapter on the farting boxer (dog, rather than pugilist)! I enjoy books about the exploits of zoo people in zoos and when I first saw the title of this book I formed the assumption that it was about the author's life and experiences at the zoo. As I progressed through it, however, it became clear that the final third rather abruptly became a series of chapters about Dr. Fisher's adventures and mis-adventures leading, or at least being part of tours overseas, mostly in Africa. For me at least, it was a little disappointing to discover that these were indeed the final segments and that there was no return to zoo matters.

Unashamedly lightweight, and with a gaudily colourful dust jacket, this publication is a sensitively written account by an animal man who made the successful transition to zoo director, embracing all its public relations, media and soliciting functions with apparent ease to become, if you will, the public face of the Lincoln Park Zoo. He shows great respect for the dignitaries and various other notable people he has met and worked with over the years, and, as mentioned earlier has had an unusually long career in an American zoo. He also expresses appreciation and gratefulness to his staff. Men of his experience and lengthy tenure who progressed in what used to be a traditional manner are fast disappearing, being replaced all too often with administrators playing into the hands of consultants, architects and zoo designers whose intent seems to be one of coming up with one design and copying it, with minor variations, everywhere. I was most impressed with the depth of feeling that Dr. Fisher has towards his charges, in particular the gorillas, with which he had more experience than most. Equally impressive, though, was his professional approach towards opportunities to further this expertise by offering animals to other collections when such behavior was far from the norm, protectionism being the order of the day even then. So strong is his feeling towards this species that the book contains the touching dedication "To Bushman, one of the greatest Lowland Gorillas that ever lived, and the only zoo animal I ever dreamed about. May your spirit continue to inspire children to care about all living creatures and thereby assure their future". The name "Bushman" will of course need no introduction to zoo veterans, myself included amongst them, as the famous and long-lived mascot and symbol, not only of the Lincoln Park Zoo but also of gorilla husbandry itself.

To refer briefly to specific items in the book, I was interested to see reference made that it was through Dr. Wesley Young that the author was introduced to the Lincoln Park Zoo. Now here is a name to which little reference is made, but Dr. Young, some years after he moved to California became director of the old, and later the new Los Angeles Zoo, overseeing the acquisition of one of the largest collections of animals at the time, in effect stocking an entire large zoo in time for its official opening. I remember visiting there soon afterwards, and the collection was indeed a sight for sore eyes. A feat difficult to repeat today, I would suggest. But I digress. I am also a little puzzled by a couple of incidents where Dr. Fisher in one case was occupied in collecting a baby elephant from Ceylon five days before attending a zoo conference in Caracas, returning to catch his Venezuelan flight by the skin of his teeth. Couldn't he have sent someone else to bring back the elephant? The other case concerns his refusal to accept the offer of a pair of Indian Rhinos from the Crown Prince of Nepal, turning them down at a public luncheon because they had committed the space to Black Rhinos. These are issues that are not adequately explained, but the style in which this book is written does not offer the forum for such explanation. Indeed it would probably be out of place, one of the frustrating things about zoo people reading books about zoo matters written in such a simple style as to be acceptable to a more general audience.

Dr. Fisher has combined an interesting blend of dealing with issues about zoos and their operation that the public is most likely to want to hear about, but at the same time not shying away or pulling his punches when issues (admittedly few of them) of some controversy are raised. Several chapters refer to Lincoln Park's successes and failures with gorillas for example, and unusually the failures and disappointments are treated with the same sympathetic candor. Even the methods used to capture babies are discussed, with appropriate regret, in a gently informative way.

Lightweight this book certainly is, but it adds to the library of volumes dealing with life in zoos at a personal level, and the general public loves this sort of thing. I hope that it sells well, because those who read it will learn of the heartbreak involved in working with animals, and also of the indescribable thrill that accompanies success. We know what that's all about only too well, and books like this are good vehicles to transmit that particular aspect of our work. Zoo professionals may find it frustrating in its brevity of detail, but it is still a most interesting read.

Once again I am indebted to the AAZK administrative staff for allowing me the privilege of reviewing this publication.

### **Wolves of the World: Natural History and Conservation**

By Todd K. Fuller 2004

Voyageur Press Inc., 123 North Second Street, PO Box 338, Stillwater, MN 55082

ISBN 0-89658-640-5

Hardcover 132 pgs. Price: \$29.95

*Review by W.K. Baker, Curator  
Little Rock Zoo, Little Rock, AR*

At first glance this book could easily be mistaken for any of the multitude of wildlife coffee table books that are out on the market at any given time. You know the type, long on pretty pictures and light on content with an author that is noted for developing travel brochures. This book does not fall into that category. I was pleasantly surprised that this book was authored by a wildlife professional and that it was extremely well written. As a point of interest, I would say that this book is one of the best general information books on a specific species that I have seen in years.

The book is broken down into eleven chapters focusing respectively on taxonomy, morphology, distribution, communications, land use, social behavior, populations, food, species interactions, humans, and conservation. Each chapter is complemented with high quality photographs and accompanying distribution graphics. The photographs clearly demonstrate both natural and social behaviors with remarkable clarity. The text is formatted in a concise reader friendly style that conveys information without overwhelming the reader with technical jargon.

While this book was clearly written for the novice or wolf devotee, nonetheless it is still a worthy addition to a zoological or wildlife professional's library as a quick reference or a tool for developing educational programming. The progressive nature of this work made it easy for me to quickly reference information on virtually any topic of interest. I would highly recommend this reference to anyone in the field of wildlife management, zoological husbandry, veterinary medicine, or anyone looking for a conservation friendly gift.

# International Congress on Zookeeping



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## SPONSORS NEEDED!

### *Second International Congress of Zookeeping*

Here's another reminder to mark your calendar for May 7-11, 2006!

Those of you who participated in the first ICZ last year in The Netherlands know what an amazing experience it was, and we hope you will plan to attend the next one on Australia's Gold Coast.

What you may not know is that generous donations from various AAZK Chapters greatly reduced the final cost of attending the conference. In the end, the total cost per participant was just \$350, which included registration, lodging, and most meals. We reached this affordable price thanks to donations from local AAZK Chapters and the various international professional keeper associations. Compared to some of the conferences we usually attend, this was a real bargain!

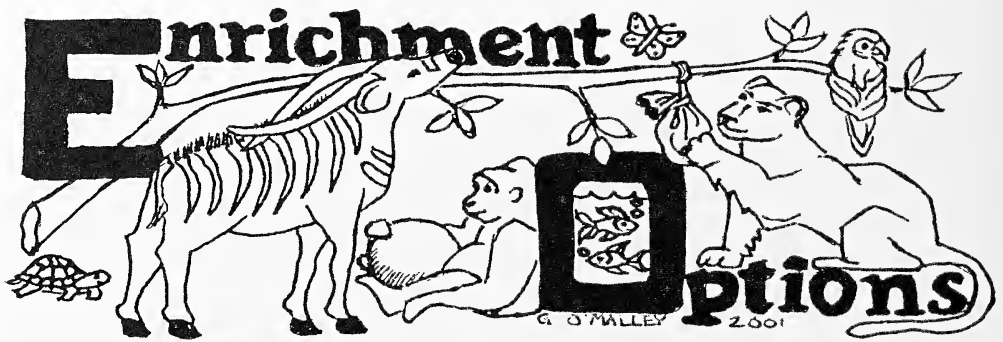
In some cases, local AAZK Chapters banded together to completely fund keepers from developing countries that would otherwise be unable to attend. These Chapters pooled their resources to pay airfare and registration costs for individuals from Latin America and other areas.

We intend to continue this generous tradition, and hope your AAZK Chapter will consider sponsoring a keeper from another country. If you prefer, you can simply donate to the general operating costs of the conference in order to reduce the overall registration cost for all participants.

Start planning an ICZ fundraiser now. Your donation can really make a difference to keepers (and animals!) in parts of the world without access to our resources.

Please send your designated ICZ donations to: AAZK, Inc., 3601 S. W. 29<sup>th</sup> St., Ste. 133, Topeka, KS 66614-2054.

Any questions? Contact  
Shane Good: [sjg@clevelandmetroparks.com](mailto:sjg@clevelandmetroparks.com)  
or  
Norah Farnham: [Norah.Farnham@zoo.org](mailto:Norah.Farnham@zoo.org)



*EO Editors - Dawn Neptune, Utah's Hogle Zoo  
and Rachel Cantrell, Disney's Animal Kingdom*

## **Environmental Enrichment Award Recipients**

The second recipient of this year's Environmental Enrichment Award is the Lindsay Wildlife Museum (LWM). They received the award for the development of their eagle enrichment program. Founded in 1955, LWM is a wildlife rehabilitation and educational center located in Walnut Creek, CA. Their mission is to connect people with wildlife and to inspire responsibility and respect for the world. They have a collection of over 120 live animals representing 60 species. All of these animals are California-native and non-releasable due to permanent physical or psychological injuries. Unlike other zoos and wildlife centers, all of the animals at LWM are exhibited indoors. Although the indoor exhibits at LWM are smaller and less-naturalistic in design than typical zoo exhibits, the staff focuses on intensive, enrichment-based husbandry which makes the most of the space by using a variety of structures and substrates inside the enclosures that are changed on a weekly basis.

### ***Live Collection Department (LCD) Eagle Enrichment Program***

#### **Overview**

**Purpose:** Physical and mental stimulation for LWM non-releasable eagles

**Concept:** Daily creancing with the LCD staff.

Originally designed as a husbandry tool to assist in moving the eagles around new areas of the museum, it eventually evolved into a formal presentation interpreted to the public by education department staff and volunteers.

**Location:** Indoor exercise area, which includes a large viewing window where visitors can observe presentations.

**Objectives:**

1. Physical stimulation - offer the diet, obtain a weight, offer an opportunity for a bath shower, encourage directed movement on perches around the exercise area.
2. Mental stimulation - engage and challenge the birds with choices while moving around the exercise area. (i.e. direction, level of difficulty, new vs. familiar)

Throughout the program, the keeper uses small pieces of diet as a motivational tool, usually placed at the end of a course or offered to the beak as reward for completion of a course. At the beginning of each presentation, the keeper is also given an opportunity to meet with the public in front of the window to share behind-the-scenes information and personal experience about working with eagles.



### Program Highlight: 1.0 Bald Eagle (*Haliaeetus leucocephalus*)

This eagle was banded in 1988 in the wild in a nest near Bozeman, MT. In 1993, he was electrocuted over farmland in Winters, CA and treated at Yolo Wildlife Rescue in Northern California. After treatment, he was transferred to LWM. In the beginning, as the LCD staff worked with him on the glove, they noticed that he showed a great deal of apprehension and low confidence when being moved around various areas of the museum. The staff documented these behaviors as excessive bating, poor balance on the glove and aversion to bathing in deep tubs of water.

A core aspect of the LCD enrichment philosophy is the idea of “choice, challenge and change”. The keepers are dedicated to providing the animals with enrichment in the way of making choices, experiencing different mental and physical challenges and introducing change in their captive lives, just as they would in the wild. Using this philosophy, the staff worked with the 1.0 bald eagle to try and improve his life as a captive animal. Some of the things the keepers tried include the following:

- Providing the eagle with a shallow dish of water for bathing.
- Creancing the eagle and encouraging him to move around familiar and new places in the museum.
- Using patience when working with him on the glove – repeating actions such as stepping up onto the glove or perching and rewarding him when a positive outcome resulted.

After six months of focus on improving some of the 1.0 bald eagle’s negative behaviors, the LCD staff developed a formal program around these enrichment sessions. Since the sessions were performed during visitor hours and in public view, it was decided that having education staff and volunteers interpret what was happening would enhance the visitor experience. This new program turned out to be a huge success – at 12:30 every afternoon visitors fill the exhibit hall at the viewing window to see a bald eagle “up close and personal”.

In 2001, the exercise area was remodeled. A large faux rock pond and waterfall were installed to improve the aesthetics of the area as well as provide the raptors with a “real” pond to bathe in. Once the raptors were acclimated to the new structure, it was incorporated into the daily eagle enrichment program. The LDC staff’s goal was to introduce the pond to the 1.0 bald eagle as an alternative to the shallow dish. This process took many months, during which the eagle accomplished many small steps leading up to his finally jumping into the pond:

- The first step was moving his shallow bathing dish very close to the pool.
- A few weeks later, staff submerged the dish in the pond.
- Next, the dish was replaced with a bed sheet of the same color (beige).
- Finally, once the eagle had successfully jumped into the pond with only a sheet, they removed the sheet and used his favorite food (trout) as encouragement to jump into the water.
- Eventually he jumped into and bathed in the pond without any help from the staff.

*The AAZK Enrichment Committee would like to once again congratulate the Lindsay Wildlife Museum on being selected for the AAZK Environmental Enrichment Award.*

(The preceding article contains information submitted to the AAZK Enrichment Committee via the Environmental Enrichment Award Nomination Ballot).

*(Ideas appearing in this column have not necessarily been tested by the editors for safety considerations. Always think ahead and use good judgement when trying new ideas. You are invited to submit material for the Enrichment Options Column. Look in the January 2004 issue of AKF for guidelines for articles acceptable for this column’s format or contact the editor at [akfeditor@zk.kscoxmail.com](mailto:akfeditor@zk.kscoxmail.com) for a copy of the guidelines. Drawings and photos of enrichment are encouraged. Send to: AKF/Enrichment, 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054, USA. Eds.)*

# Calgary Zoo's Second Annual Enrichment Day

By Amelia MacRae  
Animal Enrichment Assistant  
Calgary Zoo, Alberta, Canada  
amacrae@telus.net

The Calgary Zoo recognizes that environmental enrichment is an important and necessary part of husbandry practices for our captive animals. Increasing sensory stimulation and providing challenges such as puzzle feeders, novel objects or scents within an enclosure provides animals with opportunities to display their natural abilities and fulfill their behavioral needs. Animal enrichment is done daily at the zoo, and we wanted to showcase not only the efforts of our keepers in providing animals with stimulating objects and activities, but also to further educate the public about the importance of enrichment. We decided to hold a special enrichment day event in which the day's activities focused on our animal enrichment program.

Our first Enrichment Day was held in November 2003. A planning team was created and included staff from animal care, horticulture, research, marketing and veterinary care departments. Since it was a first-time event, it was fairly small with minimal advertising, including an announcement in our member's newsletter and a short promotional spot on a local television station. Due to winter weather conditions, most of the activities were held inside. The following descriptions show the variety of activities, and the integrative nature of the day.

Calgary Zoo visitors helped make lunch boxes filled with favorite treats for specific animals. Our Savannah building animal keepers demonstrated training techniques by holding target-training sessions with giraffes. Calgary firefighters volunteered to rearrange donated fire hose used as furniture in the gorilla enclosure. The West Edmonton Mall kindly allowed their handlers to bring two of their penguins to our facility, offering the public an opportunity to meet these fascinating birds. Our keepers conducted 'meet an owl' sessions, enabling people to get up close and personal with our 'encounter' saw whet owl (*Aegolius acadicus*). A craft table was set up for people to make simple, inexpensive enrichment toys for their pets, such as cat toys made of toilet paper tubes with cat treats inside, and dog throw toys made from donated tennis balls and rope.

Our few outdoor activities consisted of carcass feedings for our big cats and wolves and a hammock-making demonstration, in which a keeper and volunteers made a large hemp rope bed for our snow leopards. Throughout the day, interpreters incorporated information about enrichment into their regular educational programs.

Based on the public's positive response and zoo staff enthusiasm, both during and after our first Enrichment Day, we decided to make it an annual event. Our second annual Enrichment Day was on 19 July 2004. Improvements over the first year included an increased budget for both print and radio advertising, as well as more activities encouraging visitor participation.

A popular event involved a giant treat-filled (candy) log similar to the tube feeders we make for our animals. Zoo guests rolled the giant tube around, with their efforts being "rewarded" by candy falling out of pre-drilled holes in the tube. 'While You Were Out' was an activity in which City Parks and Recreation horticulturists and volunteers completed an exhibit makeover, such as rearranging "exhibit furniture" or adding new items. As the volunteers were working within the exhibit, interpreters would explain why the exhibit was being renovated. The public then watched as the animals explored the changes and additions to their enclosure. 'Changing Rooms' had two



**Tiger attacks “hanging prey” as part of the Calgary Zoo’s Enrichment Day activities.** *(photo by Cindy Peacock)*

teams of visitors go head-to-head and create a gorilla-stimulating environment with provided materials. The two rooms were then judged by our gorilla keepers based on a gorilla perspective. In the morning, Green Fools Theatre Company joined our program with a whooping crane puppet and biologist/puppeteer. They roamed the grounds explaining the precarious plight of the species. In the afternoon, the theatre company provided male and female stilt-walking whooping cranes. Visitors could ‘Be a Scientist’ at an interactive display in which they would input scientific data based on observations of “Mustache Man”, one of our meerkats. A construction centre was set up to demonstrate how various enrichment items are made, and people were again encouraged to make toys for their pets at a craft station.

The biggest hit of the day was probably the pinata made for the tigers. A volunteer constructed a deer-sized pinata out of paper-maché and burlap, filled it with ungulate hair and manure, and hung it in the tiger enclosure. It was thrilling to watch the tigers work as a team to attack, and eventually drag away their prey.

The whole day was fun and a huge success, thanks to the efforts of our staff. Over 5,700 visitors enjoyed and participated in the numerous events. Many of our activities were designed to highlight the unique behaviors of our wide variety of species, and we received public feedback saying how exciting it was to see the animals engaged and active in their enclosures.

We believe our Enrichment Day acted as a vehicle to increase visitors’ awareness about our zoo animals, as well as what they can do to have stimulated and happy pets at home. By promoting our enrichment activities in different areas of the zoo, we have fostered strong relationships among the separate zoo departments. We plan to continue the process of learning as we develop new and interesting activities for future Enrichment Days.

# ***ELECTION.....2005***

Yes! It is once again time to elect Board of Directors for the Association. There are two positions up for election. Those positions are held by Denise Wagner and Bruce Elkins whose terms end with the 2005 Conference. New Board members will serve a four-year term from the close of the 2005 National Conference until the conclusion of the 2009 National Conference. If you or any one you know would like to be nominated for these positions please send your completed forms to: Election 2005, c/o AAZK, Inc., 3601 SW 29th St., Ste. 133, Topeka, KS 66614-2054. All nominations need to be received **no later than February 28, 2005**. If you have ever wanted to make a difference in AAZK, now is the time to step up to the plate and give us your best.

## **Duties of the Board of Directors**

- 1) Select, appoint or remove officers, committees, agents and employees of the Association, including - prescribing powers and duties.
- 2) To control and manage the Association and its property, passing upon acquisition and disbursements with approval of a majority of the Board.
- 3) To formulate policies, rules and regulations in accord with the Constitution & By-Laws.
- 4) To uphold the Constitution of AAZK and the policies of the Association.
- 5) To appear at Board meetings, to accept Board assignments and to devote the time to communications pertinent to all Board business, including answering correspondence promptly and efficiently.

## **Qualifications for Nomination**

- 1) Nominee must be a Professional Member of AAZK, Inc. in good standing and must have been a member of the Association for at least one (1) year.
- 2) Nominee must be presently employed as an animal keeper/attendant, veterinary technician, research technician or other personnel directly connected with the care, feeding and educational display of captive wildlife in a recognized zoological park, aquarium, animal reserve or other animal care facility in the U. S. or Canada and must have been in the zoological field for at least two (2) years.

# **Nomination Procedure - Forms MUST be Typed**

## **1) Nominator Form:**

- a) List the name of the nominee, phone, address, and institution.
- b) State in 150 words or less the reason(s) why the nominee warrants election to the Board of Directors.
- c) Nominator signs forms and mails to NEC Chairperson.
- d) Notifies nominee that they nominated him/her for the Board of Directors.

## **2) Nominee Biographical Form:**

- a) Professional background: places of employment, length of service, titles.
- b) Membership in AAZK: National and local Chapters, number of years, offices held, involvement in activities.
- c) Educational background.
- d) Membership in Affiliate Organizations: (AZA, CAZPA, Audubon, etc.)
- e) State in 500 words or less why you would like to be on the BOD and any other pertinent information. (optional)
- f) References (one or two)
- g) Nominee signs forms and mails to NEC Chairperson.

**NOTE:** Candidate is ineligible for nomination if **both** the nominator and nominee biographical **forms** are not **complete** and **returned** by **28 February 2005** . Send to: Election 2005 c/o AAZK, Inc., 3601 SW 29th St., Ste. 133, Topeka, KS 66614-2054.

**Nomination Form for**  
**AAZK Board of Directors**

**(Forms MUST be Typed)**

**Qualifications for Nomination:**

- 1) Nominee must be a Professional Member of AAZK in good standing and must have been a member of the Association for at least one year.
- 2) Nominee must be presently employed as an animal keeper/attendant by a recognized zoological institution or aquarium in the U.S. or Canada and must have been in the zoological field for at least two years.

**1. Name of Nominee:**

**Address:**

**Phone:**

**E-mail:**

**Institution:**

**Director:**

**2. State in 150 words or less the reason(s) why the nominee warrants election to the AAZK Board of Directors. Use extra paper if needed.**

**3. Signature of Nominator: \_\_\_\_\_**

**4. Name of Nominator \_\_\_\_\_**  
*(please PRINT)*

**5. Form must be received by 28 February 2005. Send to: Election 2005 c/o AAZK, Inc., 3601 SW 29th St., Ste. 133, Topeka, KS 66614-2054.**

**Nominee Biographical Form**  
**for AAZK Board of Directors**

**(Form MUST be Typed)**

**1. Name:**

**Address:**

**Phone:**

**E-mail:**

**PLEASE LIST THE FOLLOWING INFORMATION**

**2. Professional Background: (places of employment, length of service, titles)**

**3. Membership in AAZK:**

**a) National: number of years**

**Activities:**

**b) Local Chapter(s): number of years, offices held,  
involvement in activities.**

**4. Educational Background:**

**5. Membership in Affiliate Organizations (AZA, Audubon, WWF, CAZPA, etc.)**

**6. State in 500 words or less why you would like to be on the BOD and any other pertinent information (optional/use additional paper if necessary)**

**7. References (one or two); give name, address and phone number where they can be reached:**

**8. Nominee's Signature: \_\_\_\_\_**

**9. Form must be received by 28 February 2005. Send to: Election 2005 c/o AAZK, Inc., 3601 SW 29th St., Ste. 133, Topeka, KS 66614-2054.**



# AAZK Enrichment Notebook, Third Edition CDROM Version

*A product of the American Association of Zoo Keepers, Inc.*

This 455-page publication includes many facets of animal enrichment and is indexed for easy reference. The sections include an Overview of Enrichment, Enrichment Links, Enrichment Suppliers, Suggested Guidelines (Bats, Bears, Birds, Carnivores, Fishes, Primates, Reptiles, and Ungulates), Safety Considerations, Lists of Browse Plants and Toxic Plants, Cookbook Recipes for Enrichment, Enrichment Ideas/Devices (organized by category), Sample Enrichment Forms currently used in zoological facilities, and an extensive Enrichment Bibliography. This is a searchable PDF format document utilizing Acrobat Reader which is included

## AAZK Enrichment Notebook Order Form

*(Please type or print clearly)*

I wish to order \_\_\_\_\_ copy (ies) of the AAZK Enrichment Notebook, 3<sup>rd</sup> Edition

AAZK Member \$25.00

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# Chapter News Notes



A M E R I C A N  
A S S O C I A T I O N  
O F Z O O K E E P E R S  
GREATER PHILADELPHIA CHAPTER

## San Diego AAZK Chapter

The San Diego AAZK Chapter has been holding a contest for a new Chapter Logo. We will preview the new logo in *AKF* as soon as it is available.

In mid-November the Chapter sponsored a presentation and workshop on ear-notching and processing by Curby Simerson, ZSSD Animal Care Manager. Everything you always wanted to know about ear-notching (but were afraid to ask)!

Early this month, the Chapter held a wine social and fund-raiser for the California Wolf Center. It was held at Wine Steals that features wines from around the world. Held in conjunction with the event was San Diego AAZK's famous silent auction that gave attendees an opportunity to bid on unique and extraordinary items! All proceeds from the silent auction will be donated to the California Wolf Center.

On Sunday, 23 January the San Diego AAZK and The San Diego Natural History Museum are co-hosting a talk by Dale Anderson, Mellisa Grigione, and Jim Sanderson, field experts in wild cat conservation. Wild cats face many challenges today and community needs often conflict with conservation efforts. Come hear how these field conservationists met with these issues and tackled the conflicts between man, wild cats and conservation.

*--Bob Cisneros, President  
San Diego AAZK Chapter*

## Greater Philadelphia Chapter of AAZK

The Greater Philadelphia Chapter of AAZK had a busy year! We've updated our logo to reflect our recent name change due to our expanding membership. We hosted Bowling for Rhinos in August and raised over \$6,200.00 with over 140 participants. Everyone in attendance had a great time bowling for conservation!

In addition, the Philadelphia Zoo hosted the National AZAD conference this year. Our AAZK Chapter set up a table at Zoo Day to raise funds and focus on how the Philadelphia Zoo Docent Council assists AAZK with its fundraisers and projects. It was a big success and lots of fun, and we'd like to thank the docents for including us. Congratulations on a very successful conference!

Our five delegates in attendance at the national conference in Dallas this past September had a great time, and we'd like to thank the Dallas Zoo for all of their efforts. We're already looking forward to next year in New Orleans.

*---Catherine Vine, AAZK Liaison  
Greater Philadelphia Chapter*

## **CHAPTER LOGOS**

Does your Chapter have a new logo? Please keep us up-to-date if you change your Chapter logo. Also, new Chapters are encouraged to send in a copy of their logo as soon as they adopt one. Logos may also be sent as graphic file attachments (tiff or jpeg) to the email address listed below.

We will be producing another Chapter Logo Registry in 2005, so make certain the logo in our file is your most current one. When sending in logos, please include name of the artist/designer, date logo was adopted, and what, if any, significance is in the design - animals represented, etc.

**What's your AAZK Chapter been  
up to? Send your Chapter News to  
the Editor at:  
akfeditor@zk.kscoxmail.com**

# Past Experience and Parent-Rearing in Captive Whooping Cranes

By Airlia Hansen, 2004 Conservation Centre Intern  
Calgary Zoo – Devonian Wildlife Conservation Centre  
Calgary, Alberta, Canada

## Introduction

Captive breeding programs are continuously working towards improving the breeding success of whooping cranes (*Grus americanus*) in order to increase their numbers in the wild. Whooping cranes breed unpredictably, if at all, and successful breeding depends on the strength of pair bonds which are incompletely understood. This pair bond is strengthened through parental experiences such as raising and bonding with a chick, which also improves breeding success and encourages the pair to lay more eggs next season. The key to increasing the understanding of this pair bond is to study the behavior of each individual and pair (White, 2000). This study, therefore, compares the chick-rearing behaviors of two captive adult whooping crane pairs from the Devonian Wildlife Conservation Centre (DWCC) of the Calgary Zoo. One pair has many years of chick-rearing experience, while the other has none. The behavioral knowledge gained from this study will further our understanding of the pair bond, the importance of parent-rearing experience, and how these two things can increase breeding success in the future.

## Subject and Methods

The four whooping cranes observed at the DWCC arrived between 1992 and 1995 and were costume-reared in captivity. Hope and Chinook are the only successful breeding pair at the DWCC, raising many chicks that have been released into the wild. Hope is a 12-year-old male and his mate, Chinook, at 13 years old, has laid over 58 eggs. The other pair, Duncan and Aurora, is raising their first sandhill crane (*Grus canadensis*) chick this year. Duncan is a 15-year-old male and Aurora is 11 years old, only having laid six eggs – none of which have been fertile. Though in past years this pair has broken their eggs, this year they successfully incubated their own egg, which was infertile and therefore replaced with a fertile sandhill egg that they then raised (Knapik, 2004).

Each pair has their own enclosure with access to an inside area, a pool and, during chick-rearing, a small tub filled with wild invertebrates. Observations took place daily between 08:45 and 16:15hrs. from 10 June to 28 July, 2004 behind a blind. Ten-minute focal animal samples were used, recording the duration of all behaviors lasting more than two seconds. Adjusting for out-of-sight behaviors, samples were thrown out if the individual was out-of-sight for more than 10% of the sample (one-minute). All behaviors were clumped into three categories: parental, neutral and protective. Parental behaviors include incubation, foraging and present-morsel; neutral behaviors include standing, preening, walking, shaking, resting and bathing; and protective behaviors include guard calls, alert and pacing. Once a chick was born, the distance between it and the observed parent was estimated as either within two meters or three meters or more. Hope and Chinook were observed for 40 minutes each during the pre-hatch period and four hours each during the post-hatch period. Duncan and Aurora were observed for 80 and 70 minutes respectively – as their chick hatched later – and 3.33 hours and 3.5 hours post-hatch. The percentages of time spent engaged in each behavior pre- and post-hatch were calculated. Each individual was then compared to the others, and the two pairs were compared to each other.

## Results

The results of the pre-hatch data (Table 1) show each individual engaged primarily in parental behaviors (Hope 72.54%, Chinook 50% and Aurora 80.52%), except Duncan who was mainly protective (62.88%). Compared as pairs, Hope and Chinook were 61.27% parental and Duncan and

Aurora were 51.33% parental. Hope and Chinook also exhibited more neutral behaviors (26.46%) than Duncan and Aurora (10.79%), who displayed more protective behaviors than Hope and Chinook (37.88% and 12.27% respectively). Hope incubated for a higher percentage of time than Chinook (67.79% and 49.42%), and Aurora incubated more than Duncan (75.62% and 24.73%).

Once the chicks hatched, both females spent the highest percentage of time exhibiting parental behaviors (Table 2), although Aurora was much higher than Chinook (42.41% and 72.57% respectively). The males, on the other hand, spent most of their time engaged in neutral behaviors (e.g. Hope 61.48%) and protective behaviors (e.g. Duncan 52.78%). Hope and Chinook spent 30.76% of their time in parental behaviors while Duncan and Aurora spent 48.24%. Within this category, Hope and Chinook were observed presenting morsels to their chick simultaneously and taking food morsels from each other to present to their chick. Foraging was the most common behavior in this category, especially for Aurora (71.88%). Hope and Chinook foraged 25.47% of the time while Duncan and Aurora foraged 47.57% of the time. Chinook and Aurora both foraged every day (except two days when Chinook was brooding or bathing). Hope and Chinook presented morsels to their chick 1.43% of the time while Duncan and Aurora presented morsels to their chick 0.52% of the time (Duncan being the lowest).

Both Hope and Chinook spent more time than Duncan and Aurora engaged in neutral behaviors (Hope 61.48%, Chinook 35.94%, Duncan 24.54% and Aurora 15.98%) (see Table 2). As a pair, Hope and Chinook were observed behaving neutrally 48.71% of the time, while Duncan and Aurora were only neutral 20.15% of the time. Chinook was the only crane observed bathing and Hope was the only one observed resting.

The percentage of time spent engaged in protective behaviors for Hope was 19.4%, Chinook 21.65%, Duncan 52.78% and Aurora 11.45% (refer to Table 2). Hope was observed pre-attacking or run-flapping when a zookeeper or magpie entered his enclosure. Duncan was the only one observed pacing and he did this 26.59% of the time. Hope and Chinook were protective 20.53% of the time while Duncan and Aurora were protective 31.61% of the time. Guard calling percentages were similar between pairs: 0.36% and 0.35% as were alert behaviors: 20.1% and 18.29%. Duncan, Hope and Chinook were all alert about 20% of the time, while Aurora was only alert 10.95% of the time.

Chinook spent 65.85% of her time within two metres of her chick (when visible), while Hope spent 67.24%, Duncan 9.26% and Aurora 94.04% (Table 2). There was always at least one parent within two meters of the chick, except twice near the end of observations when the chick was older.

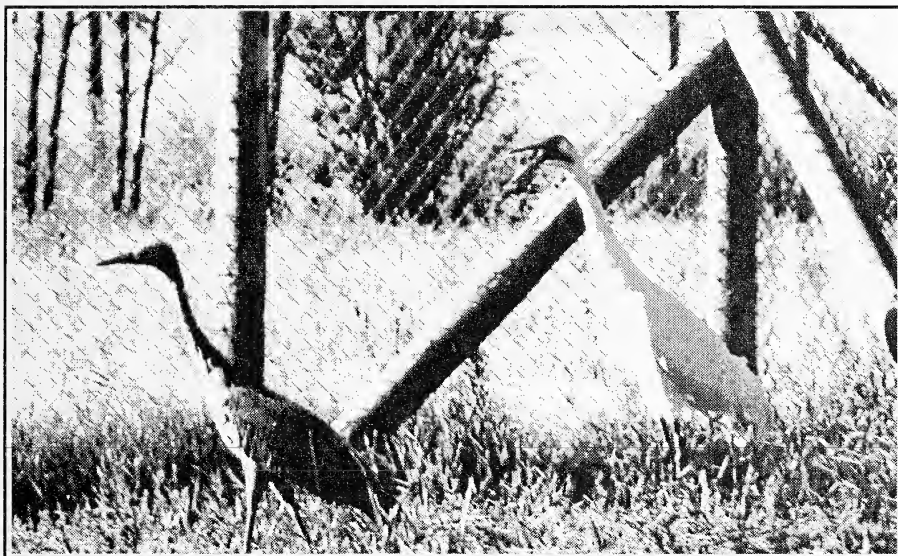
## **Discussion**

Both pairs showed attachment to their eggs during the pre-hatch period, spending the highest proportion of their time incubating and inspecting the nest (see Table 1). Both sexes of each pair shared incubation responsibilities, and Hope and Chinook follow the norm of males incubating more during the day and females more at night, based on daily observations as no night observations were done (Lewis, 1995 and Ellis et al, 1996). Duncan's lower percentage of time spent incubating is indicative of his more aggressive and alert nature, and his high percentage of pacing.

The results from the parental behavior category of the post-hatch period (Table 2) show that Hope and Chinook appear less stressed because they are more experienced and both co-operate through synchronized behavior patterns (e.g. presenting morsels simultaneously). Adhering with other research, both Chinook and Aurora foraged and fed their chicks more than the males, showing that feeding responsibilities are biased towards the females. All parents except Duncan taught their chicks to peck at the ground or water on their own for food, rather than just getting it from their parents' beaks. They did this by foraging with their chicks in the small tubs filled with invertebrates and dropping worms on the ground for them to pick up. Aurora may have overcompensated for her

lack of experience by foraging excessively, leading to a higher percentage of parental behaviors than Hope and Chinook, who seemed more relaxed and therefore foraged less as they understand what to do and knew what their chick needed. At first each pair primarily foraged, but near the end of observations (about one month post-hatch) preening behaviors began to increase. This is due to the gradual growth and independence of the chick's foraging skills and the parents' decreased need to constantly feed and forage for their chick (Ellis et al, 1996).

Neutral behaviors are considered comfort movements that, when observed, indicate low stress levels. Such behaviors were seen often in Hope and Chinook's behavior (refer to Table 2), appearing to confirm that they are calm, have little stress and are comfortable raising chicks (Lewis, 1995). Bathing and resting behaviors are also only displayed when the animal feels safe and comfortable, and these again were observed in Hope and Chinook's behavior (Knapik, 2004). Duncan and Aurora's insecurity in raising their first chick and Duncan's alert and aggressive state is evident in their rare exhibition of neutral behaviors. Experience, therefore, can provide birds with comfort and calmness in their environment.



### 0.1 Whooping Crane "Aurora" with parent-reared Sandhill Crane chick.

*(Photo by Airlia Hansen)*

Protective behaviors represent the parental drive to defend the family group. In whooping cranes, aggression towards intruders increases during incubation and chick-rearing. Hope and Chinook seemed more confident and equally alert and protective because of their equal percentages of time spent engaged in protective behaviors (see Table 2). Duncan and Aurora's higher percentages of protective behaviors stem from Duncan's high amount of pacing, a form of alertness and stress. Aurora is half as alert as the others due to her increased time spent foraging while Duncan is alert. This demonstrates that Duncan and Aurora do not work together in the same way that Hope and Chinook do and therefore are less synchronized and bonded. However, neither pair displaced their aggression towards the chick and both defended the chick when intruders were present, an indication of trustworthy parents (Knapik, 2004). Around 5 July, a week after hatching, Duncan and Aurora became more synchronized and Duncan calmed down and paced less, showing that they already gained from this experience and were learning to be better parents.

Hope and Chinook equally shared the responsibility of caring for their chick by both staying within two meters of the chick and having it between them. Duncan, due to his high percentage of pacing, was rarely observed within two meters from the chick, who was almost always near Aurora (refer to

Table 2). After awhile Duncan and Aurora were together with their chick more consistently, showing their growth as parents. Unfortunately, due to the tall grass in the enclosures - especially Duncan and Aurora's - it was difficult to see the chick sometimes and measure proximity or present-morsel behaviors, possibly causing lower percentages of time spent by Duncan and Aurora presenting morsels to their chick.

Taking a closer look at the pair bond and synchronization between the two pairs, observations show that Hope and Chinook appeared calmer and more synchronized than Duncan and Aurora. They preened, foraged and walked together in close proximity, while Duncan and Aurora only started showing a bit of this behavior near the end of observations. Hope and Chinook have gained from their many years of experience and developed their bond. The experiences gained this year by Duncan and Aurora will strengthen their bond and encourage them to raise more chicks. A strong pair bond leads to reliable parents who can then be trusted to raise endangered whooping crane chicks. By looking at their behavior it becomes clear that these reliable parents tolerate daily routine disturbances and do not redirect their aggression or neglect the egg or chick. Good parents are also attentive with feeding, brooding, defending and sheltering. Both members of the pair must incubate, as all four did, although Duncan was involved the least. Trustworthy parents are also observed walking or standing with each other, feeding and resting simultaneously, guard calling together, unison calling, males defending the territory and finally copulation. Hope and Chinook have already proven to have acquired these traits and Duncan and Aurora began proving themselves this year and will hopefully continue to show good parenting skills. In previous years, Duncan and Aurora broke their eggs, displacing their aggression and indicating that they were stressed. However, this year provided them with positive experiences that will increase their breeding success. Experts favor the parent-rearing method because it fulfills the parental drive to reproduce, nest and rear while providing them with experiences such as incubation, hatching and feeding, that reinforce the pair bond. At the same time, the chick gets constant supervision, is taught to identify and consume wild food, drink, forage, learn what is dangerous, avoid predators and humans, bond correctly, understand social life and have successful releases into the wild. For example, two-thirds of the parent-reared sandhill cranes released in Mississippi in 1981-1989 survived at least one year, successfully integrated into a wild flock, bred and reared their own chicks (Ellis et al, 1996, Doughty, 1989 and White, 2000).

Chicks should be socialized with conspecifics around three months to a year in order to develop normal social behavior. The three whooping crane chicks raised this year, including Hope and Chinook's, were put together at the end of August to do this. They interacted well and Hope and Chinook's chick was released in Florida this September. In years to come, the experience gained by Duncan and Aurora will enable them to also contribute to wild whooping crane populations (Ellis et al, 1996).

## **Conclusion**

Hope and Chinook's past experience and strong bond proved to be beneficial in their parent-rearing by making them more synchronized and comfortable. Duncan and Aurora have taken their first step and shown that they can be alert and attentive parents, hopefully improving their pair bond and breeding success for next year. As Hope and Chinook continue to be successful breeders and Duncan and Aurora strengthen their pair bond and raise more chicks, they will all gain more experience, confidence and less stress in order to reintroduce more parent-reared chicks into the wild and bring the whooping crane farther from extinction. This study has increased the understanding that breeding success increases as the pair bond strengthens and experience is gained. There were, however, limitations to this investigation of crane behavior, including a small sample size and limited observations. Further scientific investigation and statistical analysis is recommended.

## **Acknowledgements**

I would like to thank Bob Peel (Curator of Canadian Wilds, Calgary Zoo) for this opportunity and wonderful, hands-on, learning experience of animal care and endangered species conservation. I would also like to thank Journeyman Zookeepers Dwight Knapik and Rick Wenman, and Apprentice

Zookeeper Cathy Robinson for their support and guidance throughout, and for accommodating to my observation and research needs.

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| Behaviours                   | Percentages of Total Pre-hatch Time |              |              |              |              |              |
|------------------------------|-------------------------------------|--------------|--------------|--------------|--------------|--------------|
|                              | H                                   | C            | H & C        | D            | A            | D & A        |
| Incubate                     | 67.79                               | 49.42        | 58.60        | 24.73        | 75.62        | 48.48        |
| <b>Parental Behaviours</b>   | <b>72.54</b>                        | <b>50.00</b> | <b>61.27</b> | <b>25.79</b> | <b>80.52</b> | <b>51.33</b> |
| Stand                        | 8.46                                | 10.63        | 9.54         | 4.58         | 1.81         | 3.29         |
| Preen                        | 2.54                                | 11.54        |              | 0.50         | 2.02         | 1.21         |
| Walk                         |                                     | 3.08         |              | 5.56         | 5.33         | 5.46         |
| Wing spread/flap             |                                     | 0.17         | 0.08         | 0.27         |              | 0.14         |
| Rest                         | 12.25                               |              | 6.13         |              |              |              |
| <b>Neutral Behaviour</b>     | <b>26.13</b>                        | <b>26.79</b> | <b>26.46</b> | <b>11.33</b> | <b>10.17</b> | <b>10.79</b> |
| Guard Call                   |                                     | 0.42         | 0.21         | 0.67         | 0.83         | 0.74         |
| Alert                        | 1.33                                | 22.79        | 12.06        | 20.23        | 8.48         | 14.74        |
| Pace                         |                                     |              |              | 41.98        |              | 22.39        |
| <b>Protective Behaviours</b> | <b>1.33</b>                         | <b>23.21</b> | <b>12.27</b> | <b>62.88</b> | <b>9.31</b>  | <b>37.88</b> |
| <b>TOTAL</b>                 | <b>100</b>                          | <b>100</b>   | <b>100</b>   | <b>100</b>   | <b>100</b>   | <b>100</b>   |

**Table 1:** Percentages of total time spent in each behavior during the pre-hatch period for each individual and pair. H = Hope, C = Chinook, D = Duncan, and A = Aurora.

| Behaviours                   | Percentages of Total Post-hatch Time |              |              |              |              |              |
|------------------------------|--------------------------------------|--------------|--------------|--------------|--------------|--------------|
|                              | H                                    | C            | H & C        | D            | A            | D & A        |
| Present-Morsel               | 1.19                                 | 1.66         | 1.43         | 0.34         | 0.69         | 0.52         |
| Forage                       | 16.05                                | 34.89        | 25.47        | 22.05        | 71.88        | 47.57        |
| <b>Parental Behaviours</b>   | <b>19.12</b>                         | <b>42.41</b> | <b>30.76</b> | <b>22.68</b> | <b>72.57</b> | <b>48.24</b> |
| Stand                        | 9.77                                 | 4.06         | 6.92         | 1.33         | 1.25         | 1.29         |
| Shake/ruffle                 | 0.08                                 | 0.10         | 0.09         | 0.06         | 0.05         | 0.05         |
| Preen                        | 40.19                                | 15.44        | 27.82        | 2.55         | 10.94        | 6.85         |
| Walk                         | 5.83                                 | 10.09        | 7.96         | 19.20        | 1.90         | 10.34        |
| Wing spread/flap             | 0.04                                 | 1.22         | 0.63         | 0.42         | 0.11         | 0.26         |
| Rest                         | 1.63                                 |              | 0.82         |              |              |              |
| <b>Neutral Behaviour</b>     | <b>61.48</b>                         | <b>35.94</b> | <b>48.71</b> | <b>24.54</b> | <b>15.98</b> | <b>20.15</b> |
| Guard Call                   | 0.13                                 | 0.59         | 0.36         | 0.18         | 0.50         | 0.35         |
| Alert                        | 19.13                                | 21.06        | 20.10        | 26.00        | 10.95        | 18.29        |
| Pace                         |                                      |              |              | 26.59        |              | 12.97        |
| <b>Protective Behaviours</b> | <b>19.40</b>                         | <b>21.65</b> | <b>20.53</b> | <b>52.78</b> | <b>11.45</b> | <b>31.61</b> |
| <b>TOTAL</b>                 | <b>100</b>                           | <b>100</b>   | <b>100</b>   | <b>100</b>   | <b>100</b>   | <b>100</b>   |
| 1 to 2 meters                | 67.24                                | 65.85        | 66.22        | 9.26         | 94.04        | 45.68        |
| >=3 meters                   | 32.76                                | 34.15        | 33.23        | 90.74        | 5.96         | 54.32        |
| <b>TOTAL</b>                 | <b>100</b>                           | <b>100</b>   | <b>100</b>   | <b>100</b>   | <b>100</b>   | <b>100</b>   |

**Table 2:** Percentages of total time spent in each behavior during the post-hatch period for each individual and pair. H = Hope, C = Chinook, D = Duncan, and A = Aurora.

## *Whooping Cranes Shot in Kansas, Hunters Admit Guilt*

The Associated Press reported on 9 November that two whooping cranes from the population which migrates between Canada's Wood Buffalo National Park to the Aransas National Wildlife Refuge on the Texas Gulf Coast were found injured in Kansas. The two cranes were found by farmers on two different tracts of land three miles from Quivira National Wildlife Refuge. One had a broken wing and the other had a leg that had to be removed.

A report on 10 November in the *Wichita Eagle* said that seven southwest Kansas hunters admitted to U.S. Fish and Wildlife officials to shooting the two endangered whoopers in Stafford County. The hunters said they mistook the whooping cranes for sandhill cranes in the early morning light. One of the cranes has subsequently died. Charges have not been filed pending an ongoing investigation. *Source: GREENlines Issues #2229 11-09-04 and #2230 11-10-04*



# Now Available - New AAZK Logo Pins & Patches



*shown actual size*



*enlarged to show detail*

The new AAZK logo design (by Amy Burgess of Disney's Animal Kingdom) is now featured on both a patch and enameled pin. The colors are tan, rust, burgundy, grey, blue with a black border. Patches (4" x 3") cost \$8.00 each. The pins (3/4") cost \$6.00 each. Prices include domestic and Canadian shipping. This price covers postage for one pin or one patch to overseas addresses. For overseas orders of from 2-6 patches or pins, you **must** add \$2.00 additional for shipping.

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# Legislative/Conservation Update

Compiled by Georgann Johnston  
Legislative Advisor  
Sacramento, CA



## **CITES Gives Full Backing to New IATA Live Animals Regulations**

Secretary-General of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Willem Wijnstekers, has given his complete backing to the new edition of the Live Animals Regulations set down by the International Air Transport Association (IATA), which is recognized by the 166 countries members of CITES as the international standard for transporting live animals by air. Similarly, IATA provides guidance for the transport of live plants which is useful to CITES Parties.

The IATA Live Animals Regulations (LAR) are an essential source of information on how to ship animals safely, sensitively and effectively. They specify the minimum requirements for the international transport of animals, specifying ventilation, space, packing, feeding and other conditions to minimize the risk of injury, damage to health or cruel treatment. Both safety and animal welfare concerns are given attention in these regulations.

The CITES Secretariat and IATA have a long history of cooperation to ensure that animal transportation procedures comply with international and national requirements and contribute to the effective implementation of CITES by airlines, shippers, cargo agents and animal-care professionals on the ground and in the air. Representatives of IATA attending the 13th meeting of the Conference of the Parties to CITES, which ended on 14 October 2004 in Bangkok, reiterated the organization's long-term commitment towards civil aviation safety requirements whilst taking into account animal welfare, scientific progress and commercial trade realities, and expressed their willingness to share their expertise with Parties. It was agreed that the collaboration between CITES and IATA should be formalized, and that a draft resolution to that effect should be submitted at the next meeting of the Conference of the Parties, to be held in 2007.

Concerned about the overexploitation of many vulnerable species as a result of unregulated international trade, Governments adopted CITES in 1973. The treaty entered into force in 1975 and now has 166 member countries. The Convention gives producer and consumer countries joint responsibility for controlling international trade in wildlife to ensure that it is sustainable and to prevent illegal trade.

*Source: Excerpted from official CITES Press Release of 11/03/04*

## **CITES Takes Action to Promote Sustainable Wildlife Management and Combat Illegal Trade**

A two-week meeting of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in Bangkok closed on 14 October with Parties agreeing to strengthen wildlife management, combat illegal trafficking and update the trade rules for a wide range of plant and animal species.

"The Bangkok conference has crafted solutions to meet the particular needs of many wildlife species that are either endangered or that could become so if traded unsustainably," said Secretary-General Willem Wijnstekers of CITES, whose secretariat is administered by the UN Environment Programme. "These solutions seek to conserve the earth's rich heritage of biological diversity while supporting the sustainable development of local communities and national economies," he said.

The conference decided to place ramin (a Southeast Asian tree that produces high-value timber and whose forests are home to the endangered Orangutan) and agarwood (which produces "agar" oil) on Appendix II. By requiring the use of CITES export permits, these listings will improve the ability of the ramin and agarwood range states to manage tree stocks. It will also allow both exporters and importers to ensure that trade is sustainable and to tackle illegal trade.

The great white shark (*Carcharodon carcharias*) and the humphead wrasse (*Cheilinus undulatus*) - two fish species of great commercial value - were also added to CITES and can now only be traded with permits. Another marine species, the Irrawaddy dolphin (*Orcaella brevirostris*), was transferred from Appendix II to Appendix I, which forbids all commercial trade.

The African elephant (*Loxodonta africana*) was the subject of extensive debate. The conference agreed to an ambitious action plan for cracking down on unregulated domestic markets in elephant ivory. These markets serve as major outlets for poached ivory, particularly in a number of African and Asian countries. Under the action plan, all African elephant range states will strengthen their legislation and their enforcement efforts, launch public awareness campaigns and report on progress by end-March 2005. A request by Namibia for an annual quota for ivory from its national elephant population was not accepted. However, Namibia did receive permission for the strictly controlled sale of traditional ivory carvings known as *ekipas* as tourist souvenirs.

In addition, in 2002 Namibia, Botswana and South Africa were each authorized to make a one-off sale of their existing ivory stocks, with the precondition that baseline data first be established on population and poaching levels throughout the elephant's range. The Bangkok meeting was informed that this data should be available in 2005, which could permit the sales to proceed by 2006.

The meeting agreed that Namibia and South Africa may open up trophy hunting of the black rhino (*Diceros bicornis*) for the first time in many years, with an annual quota of five animals each. Swaziland may also open up strictly controlled hunting of its population of white rhino (*Ceratotherium simum*) and export some live animals. The intent of these decisions is to allow the range states to manage their rhino herds more effectively and to earn income for rhino conservation.

The Namibian population of the Nile crocodile (*Crocodylus niloticus*) was transferred from Appendix I to Appendix II to facilitate trophy hunting. The Cuban population of the American crocodile (*Crocodylus Acutus*) was similarly downlisted to enable the government to supply eggs and hatchlings to ranching operations.

The conference gave more protection to five Asian turtles and tortoises and 11 species of Madagascar's leaf-tailed geckos by listing them on Appendix II. Many turtles from South, Southeast and East Asia are traded in significant quantities for regional food markets, Asian traditional medicines and international pet markets.

Trade rules were also strengthened for a number of medicinal plants, including hoodia, used in diet pills; the desert-living cistanche, a natural tonic; and the Chinese yew tree, which boasts cancer-fighting properties.

On the sidelines of the meeting, the Secretariat announced the 2004 quotas for caviar exports from the Caspian Sea. The five Caspian Sea states agreed to take stronger action on sturgeon conservation and illegal trade and harvesting.

The 13th Meeting of the Conference of the Parties to the Convention was held from 3 - 14 October. It was attended by some 1,200 participants from 154 governments and numerous observer organizations. COP 14 will be held in 2007 in The Netherlands. *Source: Excerpted from official CITES Press Release of 10/14/04*

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### **Chinese Court Sentences Two to Death for Smuggling Endangered Wildlife**

According to *AFP*, a Chinese court sentenced two people to death and another to life in jail after they were convicted of smuggling the pelts of nearly 1,400 endangered animals into Tibet. Among the pelts confiscated were those of Bengal tigers, golden leopards, otter and lynx, all classified by China as endangered species. *Source: GREENlines Issue #2207 10-06-04*

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### **Internet Proves Vast Selling Ground for Illicit Wildlife Trade**

"Wildlife crime experts say the World Wide Web is the latest battleground in the war against increasingly sophisticated traffickers peddling endangered species around the globe," reports *Reuters*. Law enforcement officials "say they are losing the fight against an illicit trade almost as lucrative as drugs and guns." The International Fund for Animal Welfare, in an investigation, found "huge amounts of ivory being sold into and out of the UK via eBay and other Internet auction sites." *Source: GREENlines Issue #2207 10-06-04*

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### **Japan Loses Bid to Open Trade in Whales**

A U.N. meeting harpooned a Japanese bid to ease curbs on trade in whale products, but a defiant Tokyo accused the West of "cultural imperialism" and vowed to press efforts to expand whaling," according to *Reuters News Service*. The vote at the Convention on International Trade in Endangered

Species was 67 for, 55 against and 14 abstentions. The proposal would have moved minke whales (*Balaenoptera acutorostrata*) from a CITES list of most-endangered species, for which international trade is banned (Appendix I), to a less-endangered category, for which some trade is possible (Appendix II). The International Whaling Commission has a moratorium on whaling, but several countries, including Japan hunt whales for scientific purposes. Whale meat ends up on store shelves and gourmet restaurants in Japan, where it is a delicacy. *Source: GREENlines Issue #2211 10-13-04*

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### **Kenyan Call for Ban on Lion Hunting Tabled by CITES**

The members of the Convention on International Trade in Endangered Species (CITES) at its conference in Thailand tabled a request by Kenya to grant African lions (*Panthera leo*) the greatest level of protection, "The number of lions in Africa has declined by between 30 and 50% in the past 30 years," said Edward Indakwa, spokesperson of the Kenya Wildlife Service. Experts estimate that the lion population has gone from 200,000 in 1975 to about 39,000 in 2002. The lion is hunted in Africa for its supposed medicinal properties, because it is seen as a threat to livestock, and as trophies. Great Britain as well as Tanzania opposed the proposed ban which will likely be brought up again at next year's meeting in the Netherlands. *Source: GREENlines Issue #2202 9-29-04*

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### **Condors Released at Pinnacles National Monument**

"Continuing a tale of tragedy and triumph, a new chapter in one of North America's highest-profile species restoration programs will unfold in late October when scientists made the second release of California condors (*Gymnogyps californianus*) into the wild at Pinnacles National Monument," reports the *San Jose Mercury News*. The U.S. Fish and Wildlife Service and the Ventana Wilderness Society released three juvenile condors, who joined six condors that were released at the monument last December. Habitat loss, hunting and poisoning from eating carcasses with lead bullets devastated condor populations. In the early 1980s, scientists captured the only 22 surviving birds and began a captive breeding program. Currently, 105 condors live in the wild in the Pinnacles, Big Sur, Ventura County, Baja California and the Grand Canyon. *Source: GREENlines Issue #2221 10-27-04*

In a related story, in early November a California condor chick born in the wild became the first such bird to take flight in 22 years. Hatched in April near Hopper Mountain National Wildlife Refuge, the condor took a flight of 30 feet in mid-October and soared 150 feet two weeks later. The last wild condor chick to fly in the wild was in 1982. The chick's parents were bred in captivity by biologists trying to save the California condor from extinction. No other wild chicks were hatched in California this year. One died and the other is healing after it broke its wing in a fall from a nest. It may be released next spring.

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### **Republicans Set Sights on ESA in Next Congress**

"Republicans look toward larger majorities in both the House and Senate, as well as continued control of the White House, changes to the Endangered Species Act are becoming a virtual certainty in coming years," reports *Greenwire*. Republicans in the House and the Senate said legislation changing the Endangered Species Act would be a top priority once Congress convenes. House Resources Committee Chairman Richard Pombo has led the effort to weaken the Endangered Species Act. Senate Environment and Public Works Committee Chairman James Inhofe and Senator Mike Crapo, who chairs the Wildlife Subcommittee, are also looking at the Endangered Species Act. Conservationists "have characterized Republican efforts as gutting the act rather than adding the funding and enforcement mechanisms necessary to strengthen it" and also "predict the Bush administration will continue to make rule changes that shift ESA away from command-and-control approaches." *Source: GREENlines Issue #2227 11-05-04*

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### **More Species Threatened Around the World**

The World Conservation Union, also known as IUCN, released a new "red list" of more than 12,000 species that are threatened around the world at its November 17th meeting according to *Reuters*. "The scale and pace of extinction is higher now than ever before. Research indicates that the rate could even be up to 1,000 times higher than we would naturally expect," IUCN Director General Achim Steiner told a news conference. "With up to 30 per cent of the world's species facing extinction in the next 50 years, the IUCN said it would also release a damning report on what it says is shrinking government investment in conservation." *Source: GREENlines Issue #2225 11-03-04*

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### **'New' Giant Ape Found in Democratic Republic of Congo**

The animals, with characteristics of both gorillas and chimpanzees, have been sighted in the north of the Democratic Republic of Congo according to a recent report from the *BBC*. According to local villagers, the apes are ferocious, and even capable of killing lions. A report about the mysterious creatures is published in a recent edition of the UK magazine *New Scientist*. If they are a new species of primate, it could be one of the most important wildlife discoveries in decades. The discovery of these apes "reveals just how much we still have to learn about our closest living relatives," *New Scientist* says.

#### **'NEW' GIANT APE**

Large, black faces (like gorillas)

Up to two metres tall (6.5ft) Weigh 85kg-102kg (187lb-224lb)

Males make nests on the ground (like gorillas) Diet rich in fruit (like chimps)

They stand up to two metres tall, the size of gorillas, and like gorillas, they nest on the ground, not in trees. But they live hundreds of km away from any other known gorilla populations, and their diet is closer to that of chimpanzees. Primatologist Shelly Williams is thought to be the only scientist to have seen the apes. During her visit to DR Congo two years ago, she says she captured them on video and located their nests.

The discovery has baffled scientists. There are three controversial possibilities to explain the origin of the mystery apes: 1) They are a new species of ape; 2) They are giant chimpanzees, much larger than any so far recorded, but behave like gorillas; or 3) They could be hybrids, the product of gorillas mating with chimpanzees. So far, researchers have little to go on, but they now plan to return to northern DR Congo to study the apes further. *Source: BBC News 10-10-04.*

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### **Officials in India Hope to Breed Endangered Antelope**

Conservationists in the Indian Himalayas are working to set up a program to captively breed a severely endangered antelope killed for its shahtoosh wool, reports *Reuters*. The number of chiru antelopes (*Pantholops hodgsoni*) has fallen to about 75,000 from one million 50 years ago. It is estimated that 20,000 animals are killed each year to feed the demand for shahtoosh shawls, which fetch thousands of dollars in Western boutiques. Jammu and Kashmir wildlife and forest minister, Ghulam Mohideen Sofi appealed to international wildlife groups for help in saving the chiru. "Our state is currently short of funds. I appeal to international wildlife organisations to fund us for this project. I assure them the chiru can be saved from extinction," he said. *Source: GREENlines Issue #2221 10-17-04*

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### **Success for Vicuna in the Andes**

A report released by World Wildlife Fund reports the successful return of the vicuna (*Lama vicugna*) from the brink of extinction, reports the *Associated Press*. The vicuna is a fleet-footed cousin of the camel held sacred by the Incan Empire and had been killed for its wool. "They were on the endangered species list with numbers estimated at around 5,000 in the 1960s," WWF's Peru spokeswoman Jacqueline Becker told *The AP*. Thanks to international efforts, there are now about 200,000. "Antonio Brack, a leading Peruvian ecologist, said vicunas were brought back from the edge by a combination of conservation measures, offering highland dwellers economic incentives to shear wool without killing the animals and regulating markets for the product." *Source: GREENlines Issue #2218 10-22-04*

*Editor's Note: GREENlines Issues are a daily news digest from the Endangered Species Coalition about imperiled species and the people working to stop extinction. For more on what you can do visit - <http://www.stopextinction.org><*

Just Released.....

# Biological Information on Selected Mammals 4th Edition CDROM Version

*A product of the American Association of Zoo Keepers, Inc.*

The 1,396 page *Biological Information on Selected Mammal Species* CD covers a wide range from general, breeding, and young-rearing behavior to diet and physical descriptions of 590 species. The volume is in a PDF format allowing searches by Species (Common or Latin name); or Key words using the *Find* function; or by Species (Common or Latin name), Family; or Order using the *Bookmarks*. Table of Contents are given for Orders, Families, Species by Common Name, Species by Scientific Name, and Species by Order and Family. The Appendices cover a variety of information from behavioral patterns common to families (Bovoid displays) to taxonomy (Primates). References are listed by Order and Family.

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# *Volvo for Life Environmental Awards*

Do you know an environmental hero? If you do, consider nominating them for the Volvo for Life Awards, the nation's largest annual search for and celebration of everyday heroes. In its third year, these awards honor individuals who have made outstanding contributions in the field of environment, safety or quality of life. Examples might include establishing recycling programs, gardens for community food banks, environmental protection programs, etc. The deadline for submission of nominations is **10 January 2005**. Check out their website at [www.volvoforlifeawards.com](http://www.volvoforlifeawards.com) to nominate your environmental hero. Volvo will select 100 semi-finalists from among the nominations received with each receiving a Certificate of Merit to honor their efforts. Volvo will then select three finalists in the three award categories.

From the three environmental finalists, a panel of judges representing some of the world's foremost experts on care, conscience and character, will name one environmental winner. The top winner receives \$50,000 to be donated to the charity of their choice, with the remaining two finalists receiving a charitable donation of \$25,000.

The environmental winner will join winners in the quality of life and safety categories to be honored in New York City in March 2005 at the Volvo for Life Awards Ceremony in Times Square Studio Ltd. Documentaries of the finalists work will be presented and the overall winner will be named and presented with a Volvo car every three years for the rest of his or her life.

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## **Have You Purchased Your Enrichment or Biological Information CD Yet?**

**Just arrived is the 3rd Edition of the Zoonotic Diseases reference work now also in CD Format**

Following the release of the Third Edition of the AAZK Enrichment Notebook (CD), review copies were sent to several people so they could give the CD a try and see what they thought. Peter Dickinson, editor of *ZooNews Digest* out of the United Kingdom, had the following to say about this new resource - "I have spent an enjoyable past two days exploring this CD. Over the past few years I have extensively read enrichment papers and books both in paper and web format and this one takes the biscuit. It is the best I have come across so far. Certainly a very worthwhile addition to every zoo library. If you have no enrichment literature then this should be your first purchase. If you have a big enrichment library then this needs to be your next purchase! Buy it!"

Norah Farhnam of the Woodland Park Zoo in Seattle, WA had this to say about the Biological Information CD: "The information included in the CD is fantastic. Even though it may be sparse in some areas, this is presumably because that particular information is unknown/ unavailable for that species. It is, after all, according to the editors, designed to be a "thumbnail sketch of the natural history of a species". The data that is included, however, provides a great deal of information in a clear, concise format. The bookmark feature is extremely convenient. All orders are listed, and double clicking on any order will expand down to families and species, and simultaneously take you directly to the corresponding information page."

Order forms for the Enrichment Notebook CD, the Fourth Edition of the Biological Values Information on Selected Mammals CD and 3rd Edition Zoonotic Diseases, are available at the AAZK website ([www.aazk.org](http://www.aazk.org)) and order forms appear in this issue of *AKF*. All three CDs may also be ordered by phone from Administrative Office using a MasterCard or Visa. Cost for each Enrichment of Bio Info CD is \$25.00 for AAZK members and \$40.00 for nonmembers; Zoonotic Diseases CD is \$9.50 for members and \$12.00 for non-members. Prices include domestic and Canadian shipping. Additional postage for overseas orders may apply. To order by phone call 1-800-242-4519 (US) or 1-800-468-1966 (Canada).



*Institutions wishing to advertise employment opportunities are asked to send pertinent data by the 10th of each month to: Opportunity Knocks/AKF, 3601 SW 29th St., Suite 133, Topeka, KS 66614-2054. Please include closing date for positions available, and when setting these dates keep in mind that because of bulk-mail, most readers do not receive their AKF until the middle of the month or later. There is no charge for this service and fax or e-mail listings of positions which become available close to deadline are accepted. Our Fax is (785) 273-1980; e-mail: akfeditor@zk.kscsxmail.com< Listing must be sent as MS Word attachment. To post a position on the AAZK website, have listing to email address above by the 25th of the month for posting on the first day of the following month. We are no longer located at the Topeka Zoo, so please note new address to avoid delays in processing.*

### **General Manager for Aquarium - Washington, DC**

Interested candidates should contact Mr. Sam Ayoub - Email: [AyoubS@guestservices.com](mailto:AyoubS@guestservices.com)

This is a full-time regular management position that reports to the Deputy Executive Director of Biological Programs (NAIB). **Responsibilities:** Plans, directs, and oversees the administration and management of National Aquarium in DC (NADC). Integrates NADC operations with NAIB as required. Implements mission goals through the design, creation, and upkeep of living educational displays, education programs, positive visitor experiences. Meets financial goals through sound budget development, management, and marketing. Represents NADC to national and international agencies, Board committees, and the media. **Essential Functions:** 1) Plans and oversees daily operations of NADC staff, Animal Husbandry, Exhibitory, Education, Retail, and Visitor Services; 2) Develops long-range plans for, oversees direction of, and directly assists with exhibit and facility renovations; 3) Plans strategies for improvements and implementation of organizational goals; 4) Plans and administers NADC's budget development and management. Oversees and implements capital projects; 5) Consults, as required, on attendance projections, marketing, and revenue strategies; 6) Oversees all hiring, disciplinary, and firing procedures; 7) Represents the NADC on the NAIB Animal Policy Committee and insures NADC compliance with its policies; 8) Represents the Aquarium in domestic and international forums that advance the Aquarium's mission; 9) Plans, develops, and maintains institutional partnerships with the academic, non-profit, corporate communities to support and strengthen the institution; 10) Maintains knowledge of industry innovations and new techniques through professional meetings and conferences, trade journals, and regular communication with professional colleagues; and 11) Represents the Aquarium to visiting professionals, dignitaries, government officials, and the media. **Problem Solving:** Determines exhibit, facility, animal collection, and visitor needs. Oversees daily operations and facility and exhibits upkeep. Resolves issues related to exhibits, the health and well being of the animal collection, and conservation and research initiatives. **Human Relations:** Regular contact with staff at all levels and visitors. Serves as liaison to NAIB. Represents NADC in the media. Interacts with representatives of regional, national, and international institutions, organizations, and government agencies. **Accountability:** Accountable for the administration, operations, and maintenance of the NADC and its programs. Ultimate responsibility for the living collection and budget. **Human Resources:** Supervision of NADC managers and other direct-report staff. **Qualifications/Basic Job Requirements:** Bachelor's degree in biological or aquatic sciences required, advanced degree preferred. Ten (10) years experience in aquarium or related zoological field required, including five (5) in a supervisory capacity and five(5) in a hands-on husbandry capacity. Equivalent experience in a related scientific field will be considered. **Competencies:** Must have a sound professional knowledge of aquatic biology, water chemistry, animal health, and life support systems and the ability to apply those concepts to a public aquarium setting. Should have extensive background in modern aquarium exhibit design as it pertains to habitat fabrication, lighting, and construction. Should have mastery of aquarium husbandry techniques, including life support design and operation, animal husbandry, and disease recognition and treatment. Must be able to develop and implement programs and procedures that support high standards of animal health, exhibitory, and public education. Must have the skills and knowledge to oversee projects involving exhibit/facility renovations and new installations. Must possess teaching, coaching, and mentoring skills necessary for developing and retaining a highly competent staff. Must be able to communicate clearly and professionally with colleagues, staff, and other individuals. Must have broad supervisory skills for effective staff selection, performance management, and termination. Must be able to establish and oversee safety program. Should have the creativity/resourcefulness to transform NADC's mission into strategic goals and objectives, translate these into individual programs and projects, and evaluate their success/effectiveness. Must be able to monitor and evaluate visitor experience and guide improvements as necessary. Should have sufficient understanding of basic finances to effectively manage NADC's budget. Computer skills are essential. Must have demonstrated competency in aquarium-related research and publications.

### **Elephant Keeper III - Lion Country Safari, West Palm Beach, FL**

Lion Country Safari, Inc. is currently accepting applications for an experienced elephant keeper. Send resumés to: Ron Cameron, General Curator, Lion Country Safari, 2003 Lion Country Safari Rd., Loxahatchee, FL 33470; e-mail: [rcameron@lioncountrysafari.com](mailto:rcameron@lioncountrysafari.com)< **Responsibilities:** The successful candidate will join a team of keepers in providing for the management and care of 1.3 African elephants in a protected contact system. **Requirements:** A minimum of four (4) years paid zoological experience with elephants is required and a university degree in biological sciences is preferred. A competitive salary and benefit package is offered.



### **Supervisor Natural Encounters - Houston Zoo, Houston, TX**

Interested parties please send cover letter and resumé with a list of references to: Tinker Boyd, Curator of Natural Encounters Houston Zoo, 1513 N. MacGregor Drive, Houston, TX 77030. 713-533-6523. Applications may be downloaded from the Houston Zoo website at [www.houstonzoo.org](http://www.houstonzoo.org). The Houston Zoo is about to open a new building that focuses strongly on helping our guests establish fun, educational connections with our animals and we need to expand our team. If you are very motivated, a team player and love interacting with the public, you may be the person we are looking for. The animal collection is composed of various species of small mammals, birds, fish, reptiles and invertebrates. **Responsibilities:** include, but not limited to, providing daily husbandry, enrichment, training, observation, exhibit maintenance, and record keeping for this department. **Requirements:** The person we are looking for must have excellent husbandry/keeper skills, good training skills and also relate well to the public in formal, scripted presentations. The successful candidate will demonstrate energy, good problem solving skills, excellent written and oral communication skills, and strong interpersonal skills. Candidate must be able to work weekends and holidays and lift 50 pounds. Animal care experience in AZA-accredited facilities preferred.

### **Curator – Kentucky Down Under, Horse Cave, KY**

Applicants should submit a cover letter, resumé and three (3) letters of recommendation by mail to Judith Austin, Kentucky Down Under, PO BOX 189, HORSE CAVE, KY 42749. For more information about our organization visit [www.kdu.com](http://www.kdu.com). Position available for an **Animal Curator** at Kentucky Down Under, a small private animal park focusing on Australian animal species and emphasizing a “hands on” interactive and educational experience for our visitors. **Position available until filled.** **Responsibilities:** Supervise all aspects of animal care for KDU's collection of over 70 species of birds, mammals and reptiles; work with consulting veterinarian and macropod specialists to optimize animal health and condition; assist in hiring, training and supervising KDU's Animal Crew of approximately 15 keepers; assist staff in developing interactive, thematic interpretation of park exhibits for our visitors; participate in outreach programs and promotional events. **Requirements:** The successful applicant will have completed a course of study in an animal related field and have professional experience in exotic animal husbandry. S/he must be self-motivated, possess outstanding people skills and be a proven team leader. The Curator's position requires good record keeping and organizational skills and the ability to work a flexible schedule as well as a genuine regard and concern for animals. In addition, the Curator must present a professional personal appearance and have a valid driver's license with a clean driving record. A sense of humor wouldn't hurt either. For additional information, please contact Judy Austin, Director at [judyaustrin42@hotmail.com](mailto:judyaustrin42@hotmail.com) or by telephone at 1 (800) 762-2869. Kentucky Down Under is an equal opportunity employer.

### **Senior Animal Keepers (12438) – Dallas Zoo, Dallas, TX**

The Dallas Zoo is developing new mammal bird, and reptile exhibits. Starting salary at \$12.11 - \$16.04+ hourly depending on qualifications. Apply Online at: <http://jobs.dallascityhall.org> OR Apply in Person at: Civil Service Department, Dallas City Hall, 1500 Marilla St., First Floor, Section C-South Monday through Friday: 8:15 a.m. to 5:15 p.m. Email: [dalevsrv@ci.dallas.tx.us](mailto:dalevsrv@ci.dallas.tx.us) - FAX 214/670-5855 – Job Hotline: 214/670-5908. EQUAL OPPORTUNITY EMPLOYER. **Requirements:** One (1) year experience in animal care of birds, reptiles, mammals, fish or aquatic life (3 years preferred). Bachelor's degree in life sciences is preferred. **Responsibilities:** Positions involve feeding, cleaning, assisting in Zoo research, veterinary procedures, record keeping and pest control. Requires lifting, carrying, bending, extensive walking and is subject to inclement weather. Must be able to follow safety procedures for working around potentially dangerous animals. Physical exam, drug/alcohol, and TB testing is required. Must have high school diploma or equivalent.

*The Mammal Department* is seeking candidates with proven skills in exotic animal care, leadership, communication, and visitor interaction. Senior keepers actively participate in the Zoo's operant conditioning and enrichment programs. Candidates should be able to work with minimal supervision and should demonstrate the ability to lead and motivate others in a team atmosphere. The successful Senior Keeper sets the standard in his/her work section, heads assigned projects, serves as a mentor to keeper staff, and acts as an advisor and liaison to management. Current openings exist in elephants, primates and hoofed stock.

*The Bird Department* is seeking individuals with excellent husbandry/keeper skills who relate well to the public in formal and informal presentations for a new interactive bird exhibit. The successful candidate will be working for the Bird Department with responsibilities including, but not limited to, day to day bird care, diet preparation, observation, record keeping, exhibit maintenance, and other duties within the Bird Department as assigned. This position includes daily extended communication with the public. An individual with excellent communication/interpersonal skills, cheerful, knowledgeable in bird behavioral enrichment, bird training, and a broad base knowledge of birds is beneficial.

**Zoo Keeper/Wildlife Educator** - McCarthy's Wildlife Sanctuary, Inc., West Palm Beach, FL

Send resumé to: Mark McCarthy, McCarthy's Wildlife Sanctuary, Inc., 12943 61st St., N., West Palm Beach, FL 33412 or email to [info@mccarthyswildlife.com](mailto:info@mccarthyswildlife.com). For more information about our organization, visit our website at [www.mccarthyswildlife.com](http://www.mccarthyswildlife.com). Looking for a dependable person to fill full-time position as a zoo keeper/wildlife educator. **Position available until filled.** **Responsibilities:** daily care of animals and enclosures, compound maintenance, and wildlife presentations. **Requirements:** Weekends are a must. Must have work-related experience with mammals (including big cats), birds (especially raptors), reptiles and wildlife rehabilitation. Applicant must be a nonsmoker, have a professional appearance, good public speaking and people skills, an enthusiastic attitude, and a sense of humor. Should be able to tolerate hot Florida summers and willing to work in all weather conditions. Must be good with children of all ages. A valid driver's license is needed. Animal-related education preferred, but not necessary. Salary based on experience.

**General Curator in Charge of Mammal and Bird Departments** - Cougar Mountain Zoo, Issaquah, WA

Please mail resumé and references to: Cougar Mountain Zoo, 19525 SE 54<sup>th</sup> St. Issaquah, Washington 98027 or Fax: 425-392-1076 or E-mail: [cougarmzoo@aol.com](mailto:cougarmzoo@aol.com). **Responsibilities** include hands-on tasks and all related functions of animal management. **Requirements:** Candidate must have bachelor degree in related field and five (5) years of paid zoo experience. Added zoo experience may be substituted for up to two (2) years of the education. Candidate must have supervisory and communication skills, managing seven keepers, volunteers, interns and support staff. Salary is competitive and dependent on qualifications with excellent benefits.

**Team Leader - Mammal Dept.: Pachyderm/Hoofstock** - Memphis Zoo, Memphis, TN

Applications may be downloaded from the Zoo's website ([www.memphiszoo.org](http://www.memphiszoo.org)) or obtained from the Zoo's receptionist, submitted at the Zoo or mailed to Human Resources, Memphis Zoo, 2000 Prentiss Place, Memphis, TN 38112. Attach cover letter, resumé, three (3) professional references, salary history and expectations to application. Walk-in interviews, phone calls, and email are not accepted. EOE.

**Responsibilities:** Under the direction of the Assistant Curator of Mammals (Hoofstock), this full-time position will act as frontline manager and keeper. Responsibilities include the day-to-day husbandry and maintenance of the assigned area, leading the elephant training team (protected contact) and assisting the Assistant Curator with the following tasks, as assigned: assist with animal records, animal shipments, area payroll and scheduling, staff evaluations; represent the department at professional and scientific meetings; present reports; participate in discussions and other duties as assigned to lead the area staff to excellence and in support of the Memphis Zoo. **Requirements:** This position requires: five (5) years experience in exotic animal care, three years elephant handling experience, excellent interpersonal skills, well-developed organizational skills, demonstrated ability to lead and motivate others in a team atmosphere. The successful candidate should have a B.S. degree in biology or a related field or comparable combination of education and experience. The ability to think creatively and act innovatively is strongly desired.

**The following two job positions are available at the Muskoka Wildlife Centre in Ontario, Canada. If you are interested in applying for either position please fax your resume to (705) 689 0223, and include a minimum of two (2) field-related references.**

**Senior Animal Keeper** (full time / year round, competitive wages)

**Responsibilities:** The care and maintenance of 60+ native Ontario species of wildlife. Species include: eagles, moose, wolverine, bear, beaver, etc. **Requirements:** Applicants must have a minimum of three (3) years keeping experience and a general knowledge of wildlife native to our province. Must also be independent and self driven, hard working, handy, physically able, organized and good at communicating.

**Wildlife Educator** (full time / year round, competitive wages)

**Responsibilities:** Teaching the public (all ages) about Ontario wildlife. Creating and implementing nature/wildlife programs, activities and initiatives. Traveling is part of this position as it will include heading up our live animal outreach team (Canada's largest live animal outreach program). There will also be animal handling required. **Requirements:** Applicant must have a broad range of knowledge of Ontario wildlife and nature in general and a passion for teaching. An ability to public speak to groups of up to 1000 people at one time is essential. Hands-on experience with animals is also helpful although not necessary. Applicant must have a valid driver's license and must also be mature, responsible, well written, organized and flexible with hours.

**Lead Keeper of Large Mammals Hoofstock and Rhino Department** - Zoo Atlanta, Atlanta, GA

Zoo Atlanta offers a highly competitive salary and benefits package. Send resumé to: Human Resources Zoo Atlanta, 800 Cherokee Avenue, SE, Atlanta, GA 30315. [Employmentopportunity@zoatlanta.org](mailto:Employmentopportunity@zoatlanta.org) Fax: (404) 624-5833 (Equal Opportunity Employer). The Lead Keeper of this department is responsible for animal husbandry, maintenance of exhibits, holding areas, and public areas of the Hoofstock and Rhino department.

This position reports to the Curator/Assistant Curator as appropriate. The position also implements departmental activities, helps the area manager oversee staff and staff training. This is a salaried position. Salary is commensurate with experience. **Responsibilities:** With the Curator/Assistant Curator, responsible for staff schedules and daily implementation of policies, procedures and protocols to ensure the highest standards of care; participates in daily animal husbandry including participating in daily routines, learning and working multiple large mammal routines, and exhibiting a high level of performance of general keeper duties including animal care, facility maintenance, and visitor service; supervises keepers and the training of routines and animal management skills; demonstrate strong and positive leadership through example, fully supporting Zoo Atlanta's Management team, strategic management plans, and working with keepers to support these plans; actively foster constructive attitudes and a team orientation among staff plus the ability to appropriately delegate responsibilities; actively participates in workshops, seminars, activities and conferences aimed at continually improving technical skills; represents Zoo Atlanta by participating in appropriate AZA programs, TAGs, SSPs, studbooks etc.; responsible for special projects, procedures, and goals set forth by the Curator or Assistant Curator; responsible for maintaining the highest level of safety in the work area through staff training and implementation of safety protocols and procedures; in conjunction with the Curator/Assistant Curator, acts as coordinator regarding veterinary concerns, General Curator, marketing, education, maintenance, horticulture and other departments; other duties as assigned. **Requirements:** Four-year degree in biology, psychology, zoology or related field; must have five (5) years experience in animal husbandry preferably at an AZA institution. Experience with ungulates preferred; must have a strong background in animal training and enrichment; experience with behavioral research studies is a plus; familiarity with exhibit design, maintenance and construction a plus; Strong organizational and time management skills and the willingness to oversee the daily running of the department as needed; must have demonstrated leadership and personnel management skills and the ability to lead a team; must possess excellent communications skills and willingness to interact positively with guests and other zoo staff; Must be willing to work weekends and holidays, outdoors in inclement weather and able to lift 80lbs. repetitively; and must be able to obtain a Georgia Drivers License.

#### **Zoo Keeper – Claws 'N' Paws Wild Animal Park, Lake Ariel, PA**

Send resumé to: Vince Hall, Claws 'N' Paws Wild Animal Park, Box 1932 Ledgesdale Road, Lake Ariel, PA 18436 or email to vincehall@cchocs.net< Looking for a full-time keeper who is self-motivated to help care for a collection of over 120 species of mammals, birds and reptiles. We offer competitive salary, paid insurance, sick days and vacation. **Responsibilities:** include all phases of animal care, and also scheduled live animal presentations to our visitors. **Requirements:** applicant should have had paid experience in a zoo setting and have a degree in an animal-related field. Person selected should be able to work with a minimum of supervision and be able and willing to attend to any minor maintenance required.

#### **Wildlife Educator - Animal Edutainment Inc, Aubrey, TX**

Direct inquiries and resumé to: Animal Edutainment Inc., Attn: Dave Kleven, 7151 Cedar Lake Rd. Aubrey, TX 76227; (940) 365-9741; Fax (940) 440-3564 critterman@animalcd.com< For more information about our organization, check-out www.critterman.com . Position for Animal Edutainment, Inc.'s Animal Ambassador outreach program serving the Dallas/Fort Worth and surrounding areas. Located 14 miles from Denton, TX - home of two universities. **Position available until filled.** **Responsibilities:** include: daily care and maintenance of animal compound; handling of a diverse group of animals; and public speaking/program presentation. **Requirements:** Must have a professional appearance and outstanding "people skills". Non-smoker, no facial piercing or tattoos that cannot be covered by clothing. Must have a lively personality and charismatic presence. Ability to work both independently, and as a team player. Must have a valid driver's license, clean driving record, be able to lift 50lbs., and have a sense of humor. Must demonstrate the ability to listen and follow directions. Prefer animal-related education/degrees or related work experience with animals or public presentations. Starting \$9.00 to \$10.00 per hr., plus medical stipend.

#### **Reptile Keeper/Educator - Indian River Reptile Zoo, Peterborough, Canada**

If you are interested in applying for this position please fax your resumé to (705) 639-1620. Full time/year round, competitive wages/commissions. **Job Description:** Teaching the public (all ages) about reptiles and their habitat; creating and implementing nature/wildlife programs; traveling is part of this position as it will involve heading up our live animal outreach team (Canada's Largest Reptile Outreach Program). **Responsibilities:** The husbandry of over 100 reptiles and the management of our Outreach Program including public speaking to groups up to 500 people. A knowledge of reptiles is essential. **Requirements:** Applicant must have a broad range of knowledge about reptiles. The applicant must be an able public speaker and must have a valid driver's license. Indian River Reptile Zoo is Canada's only accredited reptile zoo located on Highway # 7, East of Peterborough, Ontario. Phone: (705) 639-1443 Fax: (705) 639-1620 +++Email: reptilezoo@accel.net<

The following three (3) positions are available at African Safari Wildlife Park, 267 Lightner Rd., Port Clinton, OH 43452; PH: 800-521-2660 x 9; Fax: 248-545-4125; website - <http://www.africansafariwildlifepark.com/>> African Safari Wildlife Park is accredited by the American Zoo and Aquarium Association (AZA). For any of the positions, please e-mail cover letter and resumé to [lauraaswp@aol.com](mailto:lauraaswp@aol.com) and/or you may fax the resumé to 248-545-4125 and/or you may call Laura 800-521-2660

**Zoo Keeper** - This position, which is available immediately, will be paid commensurate with experience. Housing maybe provided. **Responsibilities:** care, feeding, cleaning, husbandry, diet preparation and enrichment of an eclectic assortment of wild and exotic animals. Interaction with the public. **Requirements:** Will work closely with veterinary staff and must have good people and organization skills. Entry-level position.

**Truck Driver** - Maintenance, Transportation and Coordinator short haul truck driver. CDL Preferred. Port Clinton, Ohio area. Possible housing provided, full time position, **IMMEDIATE OPENING** call 800-521-2660 and speak to Laura.

**Zoo Curator** - This position, which is available immediately, will be paid commensurate with experience. **Responsibilities:** Supervise both section keepers and volunteers in the care, feeding, cleaning, husbandry, diet preparation and enrichment of an eclectic assortment of wild and exotic animals. Interaction with the public. **Requirements:** Will work closely with veterinary staff and must have good people and organizational skills. Must have prior animal experience including a working knowledge of USDA husbandry regulations.

**Aviculture Internship** - International Crane Foundation, Baraboo, WI

Applicants should submit a cover letter, resumé, and three (3) letters of recommendation to Kelly Maguire-Aviculture Internships, International Crane Foundation, P.O. Box 447, Baraboo, WI 53913. Final candidates will be notified for a phone or in-person interview. Stipend is \$375/month plus housing provided on site. ICF is a non-profit conservation organization that works worldwide to save the fifteen species of cranes and their habitat by providing experience, knowledge and inspiration to people. Aviculture interns receive hands-on training in the care and management of endangered cranes. †Interns will be exposed to general crane husbandry, handling techniques, health care, incubation, artificial insemination, behavior, and breeding management. **Responsibilities:** vary by season and include daily cleaning, food provisions and other care of adult cranes and chicks comprise half of the job. Other tasks include annual facilities maintenance, pen repair, video monitoring, chick rearing and assisting full-time staff with projects. **Requirements:** Two years of college or other practical experience with knowledge of and interest in bird conservation. Persons with 4-year college degrees are preferred. Must be able to carry a 50-pound feed bag and do hard work outdoors, in all weather conditions.

**Keepers and Interns** - Paws Exotic Animal Sanctuary Galt, CA

With 3 Sanctuaries located just south of Sacramento, CA. No heavy rush hour traffic & a reasonable cost of living in Northern CA. *All positions open until filled.* Send your resumé & at least three (3) verifiable work references to: PAWS, Attn: New Keepers, P.O. Box 849, Galt, CA. 95632. Or Fax 209-745-1809. Or e-mail [info@pawsweb.org](mailto:info@pawsweb.org)< We need your help taking care of our permanent residents. **Requirements:** If you are reliable, dedicated & self motivated, have experience with wild, exotic or large domestics, then we want to hear from you. We offer competitive wages & quality of life.

No experience or limited availability, we are looking for a few good interns. Send us a resumé or a letter telling us a little about yourself & why you want to be a zookeeper or intern at Paws. Include three (3) professional references and when you are available & for how long, to: Paws, Attn: New Interns, P.O. Box 849, Galt, CA. 95632. Or Fax 209-745-1809. Or e-mail [info@pawswcb.org](mailto:info@pawswcb.org) Housing provided. To find out more about our four legged friends & us go to our web site at [www.pawsweb.org](http://www.pawsweb.org)<

**Big Cat Internship** - Tiger Creek Wildlife Refuge (TCWR), Tyler, TX

For more information and to download an application packet, see [www.tigercreek.org](http://www.tigercreek.org)< **Responsibilities:** The Big Cat Internship involves Animal Care Apprentice and Public Education. This is a 90-day position (by 4 quarters/terms) allowing one to gain experience in the zoological field. Job duties include cleaning, diet preparation, light maintenance, educational tours, etc. Interns are responsible for the daily cleaning and health monitoring of a number of exotic feline species including but not limited to: tigers, lions, leopards and pumas. Big Cat Internship opportunities also include working in environmental education with schools and scout groups in a variety of learning activities. You will present short guided lessons on animal care techniques, conservation and rescue methods, backgrounds on the big cats and much more. This wide variety of teaching opportunities and educational training provides the intern with an exciting array of new skills and experiences. Training is provided by the staff. **Requirements:** At least two (2) years of undergraduate college work in wildlife management, education, biology, or related field. If no college experience then one (1) year in related field

required. Applicants must be at least 20 years of age. Animal care experience preferred. These positions require motivated persons with a degree focus in biology/zoology and some experience with a related organization. Housing is provided. Interns provide a strong commitment to the refuge, with a six day work week and light duties on Sundays.

**Environmental Interpretation and Wildlife Care Internship** – Trailside Museums and Wildlife Center, Bear Mountain State Park, Bear Mountain, NY 10911-0427. Contact: Jennifer Verstraete at (845) 786-2701 ext. 278 or 265; email – [clayne.keith-feller@oprhp.state.ny.us](mailto:clayne.keith-feller@oprhp.state.ny.us) < Start Dates: Summer internship mid-May through mid-August; Fall internship late-August/early September through early November. Internship is unpaid, but provides knowledge and experience; written evaluation gladly given. Possible course credit if intern can arrange it. Interns will work at least three (3) days a week, including one weekend day. No housing available. We reimburse full payment for required pre-exposure rabies series. Qualifications: Enthusiasm, comfortable handling animals, motivated to learn. Must be 18 or older; preference given to college student looking for experience in the care of wildlife and in environmental interpretation. Responsibilities: 1) Provide care for permanently injured or orphaned park wildlife (mammals, birds, fish, amphibians and reptiles) in zoo setting. Under the supervision of a Senior Zookeeper will prepare food and diets, maintain enclosures and exhibits, and provide enrichment; 2) Interact with the public answering questions, interpreting exhibits, possibly developing and offering short interpretive talks.

**Big Cat Internship** – Wildlife on Easy Street, Tampa, FL

For more information contact Scott Lope at 813-323-5991 or email at [catfoto1@aol.com](mailto:catfoto1@aol.com) < Two (2) positions available for six-month internship at TAOS accredited non-profit big cat sanctuary. [www.wildlifeoneasystreet.com](http://www.wildlifeoneasystreet.com) < **Responsibilities** (include but are not limited to): daily husbandry, exhibit cleaning, diet preparation, feeding, operant conditioning and behavioral enrichment for the following species: lions, tigers, leopards, cougars, lynxes, servals, caracals, bobcats, lemurs and other exotic animals. We provide invaluable hands-on experience, on-site housing and utilities, safety training and educational materials. Advanced training and long-term employment opportunities exist for the right candidates. **Requirements:** applicants must be willing to work six days a week, some holidays and follow strict safety guidelines. Hard work ethic and love of animals more important than degree.

**Internships** - The Florida Aquarium, Tampa, FL

Internships are available in Animal Health, Animal Programs and Husbandry departments. Internships available year-round for varying lengths of time and can be tailored to the individual student's needs. Internships are unpaid but provide valuable hands-on experience. Interested persons should send resumé to: Human Resources, 701 Channelside Dr., Tampa, FL 33602. For more information visit our website at [www.flaquarium.org](http://www.flaquarium.org) < **Responsibilities:** food preparation, feeding, cleaning enclosures, assist with medical procedures, animal observations, daily record keeping, enrichment activities, assist with training sessions and shows.

**Zoo Design Internship** - ZooLex, Vienna, Austria

In 2002 the ZooLex Zoo Design Organization started to offer internships. Carlyn Worstell was our first intern. She finished her internship with the ZooLex Zoo Design Organization in September 2003 and is now working with the Wildlife Conservation Society at Bronx Zoo. We offer internships in Vienna, Austria. Interns who stay for a few weeks only, mainly work on the ZooLex Gallery. Interns who stay longer also complete a research project. You will find more information on ZooLex internships here: <http://www.zoolex.org/intern.html> < ZooLex Zoo Design Organization is a non-profit organization registered in Austria. ZooLex runs a professional zoo design website and distributes a newsletter. More information and contact: <http://www.zoolex.org/home.html> <

**SOS Rhino Seeks Volunteers**

SOS Rhino is looking for volunteers interested in helping us in our efforts to save the Sumatran rhinoceros. Our Borneo Team is studying the demographics of the remaining animals in Tabin Wildlife Reserve to determine when patrol units, habitat protection, or translocation may play a role in the rhinos' survival. Please visit SOS Rhino's web site for detailed information: <http://www.sosrhino.org/programs/volunteer.php> Or contact Cindy Salopek, Projects Associate/SOS Rhino via e-mail at: [cindy@sosrhino.org](mailto:cindy@sosrhino.org) <

**Volunteer Positions** - Orangutan Health Project in Sumatra, Indonesia

A research project, now in its 5th year, aims to discover more about the special behaviors and ecological conditions necessary for the maintenance of health in wild orangutans. MVDr. Ivona Foitova leads a truly international team of scientists in an attempt to improve the environment of captive orangutans, and the chances of work on the ground also helps to guard the forest against the devastating impacts of logging on the natural habitat of one of the last great apes. **Responsibilities:** volunteers will be part of the team helping in every way - from simple data entry and getting supplies for our base, to locating, counting or following wild orangutans in the forest of

North Sumatra. This may not always be enjoyable, but it will certainly be memorable. For more information on the project and our volunteer program, log on to: <http://www.orangutan-health.org> or email us at: [orangutanhealth@indo.net.id](mailto:orangutanhealth@indo.net.id)

**Volunteer Positions Available** - Munda Wanga's Wildlife Park and Sanctuary - Zambia

For more information contact Lee Stewart through e-mail: [sanctuary@zamnet.zm](mailto:sanctuary@zamnet.zm) or take a look at our website: <http://www.mundawanga.com> Three week volunteer opportunities available to keen and enthusiastic people looking to gain hands on experience working at an African wildlife park and sanctuary. Species that you could be working with include lions, tigers, wild dogs, various primates, an American black bear and a baby elephant. Volunteer duties will vary hugely upon volunteer's interest, previous experience and the Park and Sanctuary's priorities, which will vary according to the time of year and what construction/relocation programmes are on at the time. Longer volunteer periods are available depending upon volunteer's experience.

**The Mauritian Wildlife Foundation Volunteers** - The Mauritian Wildlife Foundation (MWF) is a charitable

conservation NGO based in Mauritius working hard to save the endemic fauna and flora of the Mascarenes (Mauritius, Rodrigues and surrounding islets). It is best known for its successes, through partnership with the Durrell Wildlife Conservation Trust's Jersey Zoo, in recovering the Mauritius kestrel from only four birds, the pink pigeon from only a dozen birds and, most recently, the echo parakeet from about 20 birds. Pigeon and parakeet work is intensive and ongoing and new projects are under development for endangered endemic songbirds and reptiles. MWF operates a team of up to 100 or more staff and volunteers working on bird, reptile and plant projects. Volunteers are accepted for six month stays after which they may be asked to join the team for a longer period, according to requirements and performance. Volunteers are expected to finance their own travel, comprehensive insurance, (including repatriation), and living expenses while in Mauritius (the latter approx £150 per month) but receive free accommodation and access to basic office facilities including fax, telephone and Internet. Work on the pink pigeon project consists of supplementary feeding, predator control and monitoring, data collection on breeding and feeding behaviors of the pigeons and may include capture, handling and ringing experience, disease monitoring and control and radio-telemetry. Volunteers are based in basic, but adequate, field stations for five days each week and have the use of a communal residence during the weekends. Volunteers needed for echo parakeet and passerine breeding seasons (Sept through February) will be based either at our residential house near our captive breeding facility and will be largely involved with hand-rearing, captive management and potentially re-introductions, or at one of the field stations involved with nest monitoring, nest manipulation, release and monitoring of wild populations. Any applicant should be hard working, self-motivated and easy going. They must be able to live in isolated and sometimes claustrophobic conditions while maintaining good humor, tolerance of others and, above all, high standards of work. They must have no concerns about humane predator control and be physically and mentally fit and strong. The successful applicant will experience at first hand, a cutting-edge, conservation initiative, learning all the necessary skills and methods, aimed at saving some of the worlds rarest bird species from extinction. Applicants should send (preferably by email) a letter of application and full CV, including two (2) references, (with contact details including telephone and email) to: David Wills, Pink Pigeon Project Coordinator, Mauritian Wildlife Foundation, Grannum Road, Vacoas, Mauritius; Fax(230) 697 6512; [dwills@mwf.intnet.mu](mailto:dwills@mwf.intnet.mu)

More Zoo vacancies can be seen by visiting:

American Zoo and Aquarium Association - Job Listings

<http://www.aza.org/JobListings/>

American Association of Zoo Keepers - Opportunity Knocks

[http://www.aazk.org/aazknew/animalKeepersForum/opportunity\\_knocks.asp](http://www.aazk.org/aazknew/animalKeepersForum/opportunity_knocks.asp)

European Association of Zoos and Aquaria - Vacancies

<http://www.eaza.net>

Berufsverband der Zootierpfleger e.V

<http://www.zootierpflege.de>

# AAZK Membership Application

check here if renewal [ ]

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City \_\_\_\_\_ State/Province \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_

Country \_\_\_\_\_ Email \_\_\_\_\_

## U.S. Members

**\$40.00 Professional**

*Full-time Keepers*

**\$70.00 Professional**

*Renew for 2 years & Save!  
Full-time Keepers Only*

**\$35.00 Affiliate**

*Other staff & volunteers*

**\$35.00 Associate**

*Those not connected with  
an animal facility*

**\$65.00 or up - Individuals  
Contributing/U.S.**

**\$125.00 or up**

**Institutional/U.S.**

*Organizations/Institutions  
(requires Board approval)*

**International Members**

**\$55.00 International**

*All members outside U.S. &  
Canada regardless of category*

## Canadian Members

**\$40.00 Professional**

*Full-time Keepers*

**\$70.00 Professional**

*Renew for 2 years & Save!  
Full-time Keepers Only*

**\$40.00 Affiliate**

*Other staff & volunteers*

**\$40.00 Associate**

*Those not connected with  
an animal facility*

**\$65.00 or up - Individuals  
Contributing/Canada**

**\$125.00 or up**

**Institutional/Canada**

*Organizations/Institutions  
(requires Board approval)*

**Library Only**

**\$40.00 Library**

*Available only to public  
& university libraries*

Zoo Affiliation (if any) \_\_\_\_\_

Zoo Address \_\_\_\_\_

Title \_\_\_\_\_

Work Area \_\_\_\_\_

My check is enclosed (AAZK, Inc.)  Please charge my credit card

MASTERCARD      VISA      Card # \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Name on card \_\_\_\_\_ Expiration date \_\_\_\_\_

Signature \_\_\_\_\_

Mail this application to: AAZK Administrative Offices, 3601 S.W. 29th, Suite 133 Topeka, KS 66614-2054. Make checks/money orders payable to AAZK, Inc. Must be in U. S. FUNDS ONLY. Membership includes a subscription to *Animal Keepers' Forum*. The membership card is good for free admission to many zoos and aquariums in the U.S. and Canada.



**AMERICAN  
ASSOCIATION  
of ZOO KEEPERS**

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Topeka, KS  
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Animal Keepers' Forum  
30th Anniversary  
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